



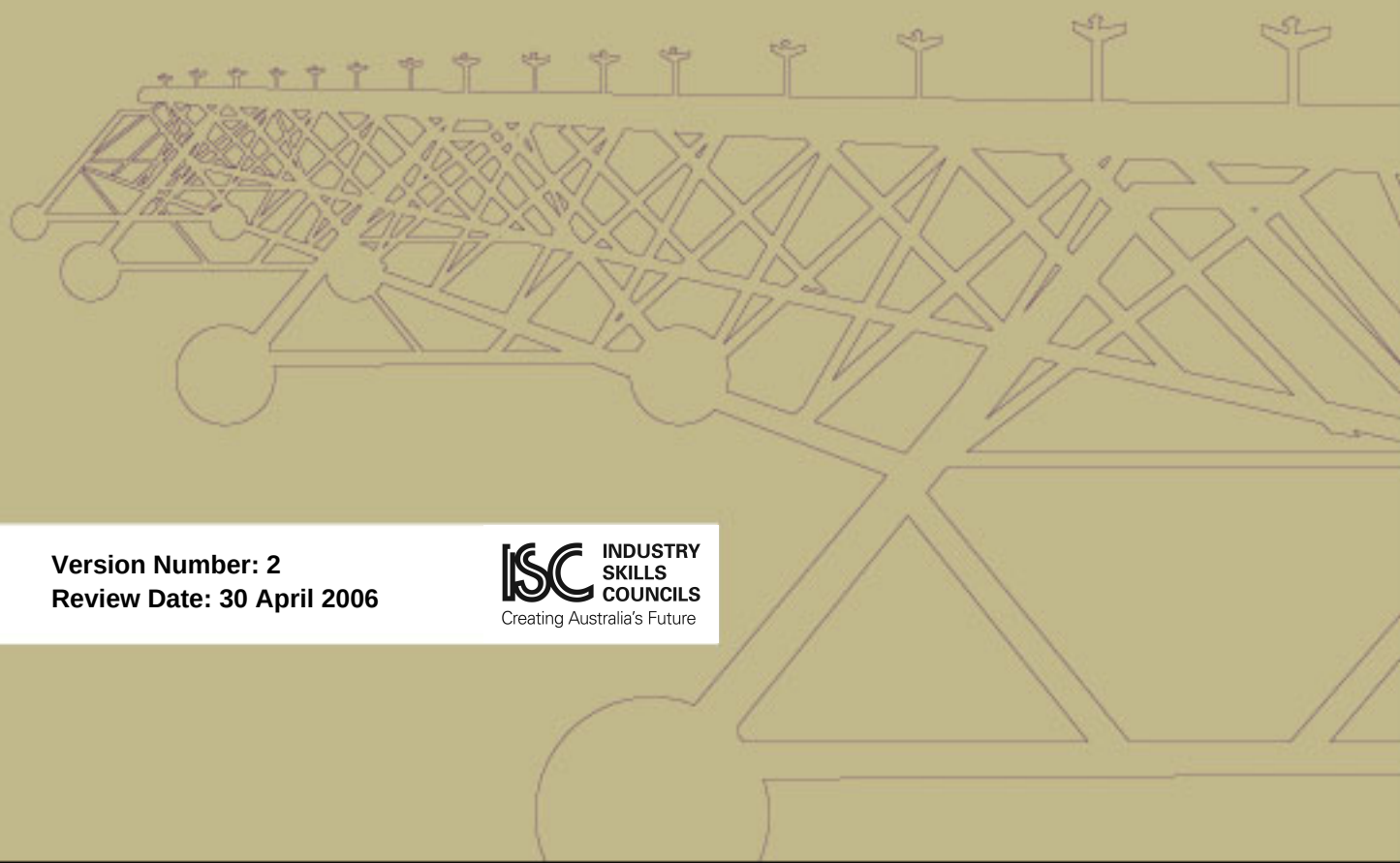
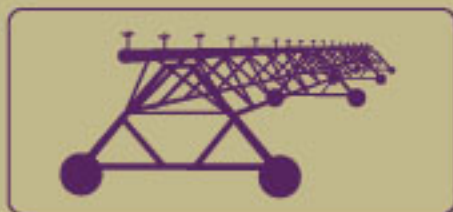
Australian Government
**Department of Education,
Science and Training**



**Agrifood
Industry Skills
Council**

RTE03 Rural Production Training Package

Volume 2 of 8



Version Number: 2
Review Date: 30 April 2006

ISC **INDUSTRY
SKILLS
COUNCILS**
Creating Australia's Future

RTE03 Rural Production Training Package

The contents of this volume refer only to the Endorsed Components of RTE03 Rural Production Training Package. This volume should not be read in isolation but in the context of the Training Package as a whole.

Volume 2 of 8 Rural Production Volume 2 - Units of Competency

Volume 1: Rural Production Introduction, Qualification Packaging, Assessment Guidelines

Volume 3: Rural Production Units of Competency

Volume 4: Rural Production Units of Competency and Units of Competency Imported from RTD02 Conservation and Land Management Training Package and RTF03 Amenity Horticulture Training Package

Volume 5: Units of Competency Imported from other Training Packages

Volume 6: RTC Common Units of Competency

Volume 7a: Rural Production units of competency for additional sectors

Volume 7b: Units of Competency imported from other Training Packages for additional Sectors

Endorsed by the National Training Quality Council 10 April 2003. This Training Package is to be reviewed by April 2006.

RTE03 - Rural Production Training Package

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Version Modification History

The version details of this endorsed Training Package are in the table below. The latest information is at the top of the table.

Version	Release Date	Comments
2	21/09/2007	Addition of Volumes VIIa and VIIb, including four new qualifications in commercial composting, new suggested pathways and specialisations in alpaca, beekeeping, deer production, emergency disease and plant pest response, fertiliser and soil ameliorant industry operations, mushroom production, olive production and organic production. Further changes include new units of competency, three replacement units of competency, new versions of endorsed units of competency and additional imported units of competency. New versions of endorsed units have replaced original version units in Volumes I, II and III. Assessment Guidelines and Qualifications Framework text updated to conform to new requirements. Addition of descriptive material relating to new sectors added to RTE03 (alpaca, beekeeping, deer production, emergency disease and plant pest response, fertiliser and soil ameliorant, mushroom production, olive production and organic production) Deletion of matrix of units from (former) Part F. Addition of four qualifications in commercial composting (refer Qualifications Framework, Volume I): • RTE20807 Certificate II in Commercial Composting • RTE32107 Certificate III in Commercial Composting • RTE40707 Certificate IV in Commercial Composting • RTE50507 Diploma of Commercial Composting. New RTE units added to commercial composting qualifications: • RTE2315A Operate a compost bagging process • RTE2506A Assess and receive raw materials for composting • RTE2507A Recognise raw materials, production processes and products on a composting site • RTE2608A Set up, operate and maintain a water delivery system • RTE2709A Recognise and respond to fire emergencies on a composting site • RTE3322A Operate compost processing plant, machinery and equipment • RTE3323A Dispatch materials and composted product • RTE3512A Prepare raw materials and compost the feedstocks • RTE3513A Prepare value-added compost-based products • RTE4027A Develop a soil health and plant nutrition program • RTE4519A Develop a composting recipe

Version	Release Date	Comments
		• RTE4520A Plan and schedule compost production • RTE5919A Identify and secure raw materials supply for compost production. Additional imported units from other Training Packages included in the commercial composting qualifications: • PMLSAMP200A Collect routine site samples • TDTB397B Carry out vehicle servicing and maintenance • TDTI297C Apply customer service skills • PRMWM15A Move waste using load shifting equipment • MNQOPS339A Conduct sales loader operations • MNQOPS262A Operate medium vehicles • PMLORG301A Plan and conduct laboratory/field work • PMLTEST300B Perform basic tests • TDTE701A Use communications system • PMLTEST406A Perform physical tests • BSBMKG601A Develop marketing strategies • BSBMKG602A Develop a marketing plan • TDTJ798B Conduct internal quality audits • PRMWM43B Develop an environmental management strategy • BSBHR401A Administer human resource systems Addition of new suggested pathways for specialisations: • RTE20103 Certificate II in Agriculture, pathways added in alpaca and beekeeping • RTE30103 Certificate III in Agriculture, pathways added in alpaca and beekeeping • RTE40103 Certificate IV in Agriculture, pathways added in alpaca, beekeeping, deer production and organic production • RTE50103 Diploma of Agriculture, pathways added in beekeeping, deer production and organic production • RTE20603 Certificate II in Production Horticulture, pathways added in mushroom production and olive production • RTE31603 Certificate III in Production Horticulture, pathways added in mushroom production and olive production • RTE40503 Certificate IV in Production Horticulture, pathways added in mushroom production and olive production • RTE50303 Diploma of Production Horticulture, pathways added in olive production • RTE31903 Certificate III in Rural Operations, pathway added in fertiliser and soil ameliorant operations. Addition of one new qualification with a suggested pathway page: • RTE60307 Advanced Diploma of Production Horticulture specialising in olive production.

Version	Release Date	Comments
		Addition of new units of competency to the suggested pathways and new qualification noted above and to: - RTE10103 Certificate I in Rural Operations, unit added: RTE1107A Support organic production. - RTE20103 Certificate II in Agriculture, units added: RTE2031A Handle and move mushroom boxes RTE2032A Water mushroom crops RTE2152A Shear alpacas RTE2153A Carry out alpaca handling and husbandry operations RTE2154A Support alpaca shearing operations RTE2155A Undertake basic skirting of alpaca fleece RTE2156A Support beekeeping work RTE2157A Open and reassemble a beehive RTE2217A Construct and repair beehives RTE2305A Use a bee smoker RTE2505A Perform mushroom substrate process tasks RTE2708A Work effectively in the mushroom industry. - RTE30103 Certificate III in Agriculture, units added: RTE3150A Class alpaca fleece RTE3151A Mate and monitor reproduction of alpacas RTE3152A Plan and prepare for alpaca shearing RTE3153A Manage honey bee swarms RTE3154A Requeen a honey bee colony RTE3155A Manipulate honey bee brood RTE3156A Rear queen bees RTE3319A Ground spread fertiliser and soil ameliorant RTE3320A Remove a honey crop from a hive RTE3321A Extract honey RTE3407A Identify and report unusual disease or plant pest signs RTE3408A Carry out emergency disease or plant pest control procedures at an infected premises RTE3409A Carry out movement and security procedures RTE3410A Work effectively in an emergency disease or plant pest response

Version	Release Date	Comments
		RTE3415A Manage pests and disease within a honey bee colony RTE3511A Supervise mushroom substrate preparation RTE3818A Develop and apply fertiliser and soil ameliorant product knowledge. - RTE40103 Certificate IV in Agriculture, units added: RTE4013A Manage mushroom crop development RTE4029A Assess olive oil for style and quality RTE4113A Handle, store and grade deer velvet RTE4121A Select and establish an apiary site RTE4122A Produce and harvest royal jelly RTE4126A Oversee alpaca farm activities RTE4128A Provide bee pollination services RTE4130A Trap and store pollen RTE4131A Collect and store propolis RTE4132A Perform queen bee artificial insemination RTE4133A Manage organic livestock production RTE4408A Supervise activities on infected premises RTE4409A Carry out field surveillance for a specific emergency disease or plant pest RTE4515A Manage mushroom substrate preparation RTE4516A Control Phase II mushroom substrate process RTE4517A Manage organic soil improvement RTE4518A Manage biodynamic production RTE4814A Provide information and referrals on environmentally responsible fertiliser and soil ameliorant use RTE4920A Develop harvesting and processing specifications to produce an olive oil. - RTE50103 Diploma of Agriculture, units added: RTE5105A Comply with deer industry national velvet accreditation requirements RTE5108A Harvest deer velvet RTE5406A Manage the implementation of an emergency disease or plant pest control program RTE5407A Manage active operational emergency disease or plant pest sites RTE5526A Develop an organic management plan

Version	Release Date	Comments
		RTE5527A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs RTE5923A Prepare the enterprise for organic certification RTE5924A Research and apply rural industry knowledge. - RTE60103 Advanced Diploma of Agriculture, units added: RTE6401A Plan and oversee an emergency disease or plant pest control program RTE6402A Develop a plant pest survey strategy RTE6403A Develop a plant pest destruction strategy. Updated units of competency included in qualifications and suggested pathways for specialisations: - RTE2113B Monitor livestock to parturition - RTE2124B Carry out birthing duties - RTE2128B Provide feed for livestock - RTE2131B Care for health and welfare of livestock - RTE2503B Observe and report on weather - RTE2707B Follow site quarantine procedures - RTE2902B Collect and record production data - RTE3115B Implement livestock husbandry practices - RTE3121B Prepare animals for parturition - RTE3124B Rear newborn and young livestock - RTE3133B Prepare livestock for competition - RTE3138B Determine wool characteristics - RTE3504B Collect samples for a rural production or horticulture monitoring program. Units deleted from qualifications and suggested pathways for specialisations and replaced with new units: - RTF4004A Develop a plant nutrition program deleted and replaced with RTE4027A Develop a soil health and plant nutrition program - RTE2003A Carry out postharvest operations deleted and replaced with RTE2033A Carry out post-harvest operations - RTE4012A Supervise horticultural crop harvesting deleted and replaced with RTE4028A Implement and monitor a horticultural crop harvesting program. Additional units of competency imported from other Training Packages to the suggested pathways and new qualification noted above: - BSBCMN304A Contribute to personal skill development and learning - BSBCMN305A Organise workplace information - BSBFLM404A Lead work teams - BSBFLM507A Manage quality customer service - BSBFLM511A Develop a workplace learning environment

Version	Release Date	Comments
		• BSBHR401A Administer human resource system • BSBMKG601A Develop marketing strategies • BSBMKG602A Develop a marketing plan • FDFCORFSY2A Implement the food safety program and procedures • FDFCORQAS2A Implement quality systems and procedures • FDFCORQFS3A Monitor the implementation of quality and food safety programs • FDFHYCH2A Operate a creamed honey manufacture process • FDFOPTHCP3A Participate in a HACCP team • FDFOPTISP2A Implement sampling procedures • FDFZCSCS2A Clean and sanitize equipment • FDFZCSCIP2A Clean equipment in place • FDFZPKPP2A Operate a packaging process • FPIFGM139A Operate a 4X4 vehicle in off-road conditions • FPICOT3231A Operate steam boiler • MNMOLH305A Conduct front end loader operations • MNQOPS339A Conduct sales loader operations • MNQOPS262A Operate medium vehicles • PMLSAMP200A Collect routine site samples • PMLSAMP400B Obtain representative samples in accordance with sampling plan • PMLTEST300B Perform basic tests • PMLTEST406A Perform physical tests • PRMPFES03B Safely move materials and loads in the workplace • PRMWM04B Develop waste management strategies PRMWM07B Implement waste management plan PRMWM15A Move waste using load shifting equipment PRMWM43B Develop an environmental management strategy PRMWM45B Develop site safety plan PRSSO323A Lead small teams PSPGOV307B Organise workplace information PSPGOV417A Identify and treat risks PSPPA601A Manage public affairs PSPPM405A Administer simple projects PUACOM001B Communicate in the workplace PUADEFRM205A Manage emergency operations PUAOPE001A Supervise response PUAOPE005A Manage a multi-team emergency response PUAOPE006A Control multi-agency emergency situations PUAOPE007A Command emergency personnel within a

Version	Release Date	Comments
		multi-agency emergency response PUAOPE008A Coordinate resources within a multi-agency emergency response PUAPOL017A Plan and develop strategies to support organisational policy PUAWER001A Identify, prevent and report potential workplace emergency situations RTF2001A Apply a range of treatments to trees RTF2017A Prune shrubs and small trees RTF3017A Implement a tree pruning program RTF4514A Develop soil survey maps RUV3501A Provide advice on companion animal selection and general care TDTB397B Carry out vehicle servicing and maintenance TDTD497B Load and unload goods/cargo TDTD1497B Load and unload vehicles carrying special loads TDTE701A Use communication systems TDTF1397B Coordinate breakdown and emergencies TDTI297C Apply customer service skills TDTJ798B Conduct internal quality audits.
1	April 2003	First release

Forms control: All endorsed training packages will have a version number displayed on the imprint page of every volume constituting that training package. Every training package will display an up-to-date copy of this modification history form, to be placed immediately after the contents page of the first volume of the training package. Comments on changes will only show sufficient detail to enable a user to identify the nature and location of the change. Changes to training packages will generally be batched at quarterly intervals. This modification history form will be included within any displayed sample of that training package and will constitute all detail available to identify changes.

Qualifications Framework

The Australian Qualifications Framework

What is the Australian Qualifications Framework?

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF see the *AQF Implementation Handbook, 3rd Edition 2002*. You can download it from the Australian Qualifications Advisory Board (AQFAB) website (www.aqf.edu.au) or obtain a hard copy by contacting AQFAB on phone 03 9639 1606 or by emailing AQFAB on aqfab@curriculum.edu.au

The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the vocational education and training (VET) sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

Qualifications

Training Packages can incorporate the following eight AQF qualifications.

- Certificate I in ...
- Certificate II in ...
- Certificate III in ...
- Certificate IV in ...
- Diploma of ...
- Advanced Diploma of ...
- Vocational Graduate Certificate of ...
- Vocational Graduate Diploma of ...

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the *AQF Implementation Handbook* and the Australian Quality Training Framework *Standards for Registered Training Organisations*, particularly Standard 10.

Statement of Attainment

Where an AQF qualification is partially achieved through the achievement of one or more endorsed units of competency, an RTO may issue a Statement of Attainment. Issuance of Statements of Attainment must comply with the advice provided in the *AQF Implementation Handbook* and the Australian Quality Training Framework *Standards for Registered Training Organisations*, particularly Standard 10.

Under the *Standards for Registered Training Organisations*, RTOs must recognise the achievement of competencies as recorded on a qualification or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

AQF Guidelines and Learning Outcomes

The *AQF Implementation Handbook* provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

Certificate I

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.

Applications may include a variety of employment related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction
- receive and pass on messages/information.

Certificate II

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for own outputs in work and learning.

Certificate III

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures

and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge
- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others.

Certificate IV

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

Diploma

Characteristics of Learning Outcomes

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal

responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes.

Advanced Diploma

Characteristics of Learning Outcomes

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters.

Vocational Graduate Certificate

Characteristics of competencies or learning outcomes

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.

- Substantial breadth and complexity involving the initiation, analysis, design, planning, execution and evaluation of technical and management functions in highly varied and highly specialised contexts.
- Applications involve making significant, high-level, independent judgements in major broad or planning, design, operational, technical and management functions in highly varied and specialised contexts. They may include responsibility and broad ranging accountability for the structure, management and output of the work or functions of others.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

Distinguishing features of learning outcomes

- Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.
- Generate and evaluate ideas through the analysis of information and concepts at an abstract level.
- Demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills in complex contexts.
- Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

Vocational Graduate Diploma

Characteristics of competencies or learning outcomes

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth, depth and complexity involving the initiation, analysis, design, planning, execution and evaluation of major functions, both broad and highly specialised, in highly varied and highly specialised contexts.
- Further specialisation within a systematic and coherent body of knowledge.
- Applications involve making high-level, fully independent, complex judgements in broad planning, design, operational, technical and management functions in highly varied and highly specialised contexts. They may include full responsibility and accountability for all aspects of work and functions of others, including planning, budgeting and strategy development.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

Distinguishing features of learning outcomes

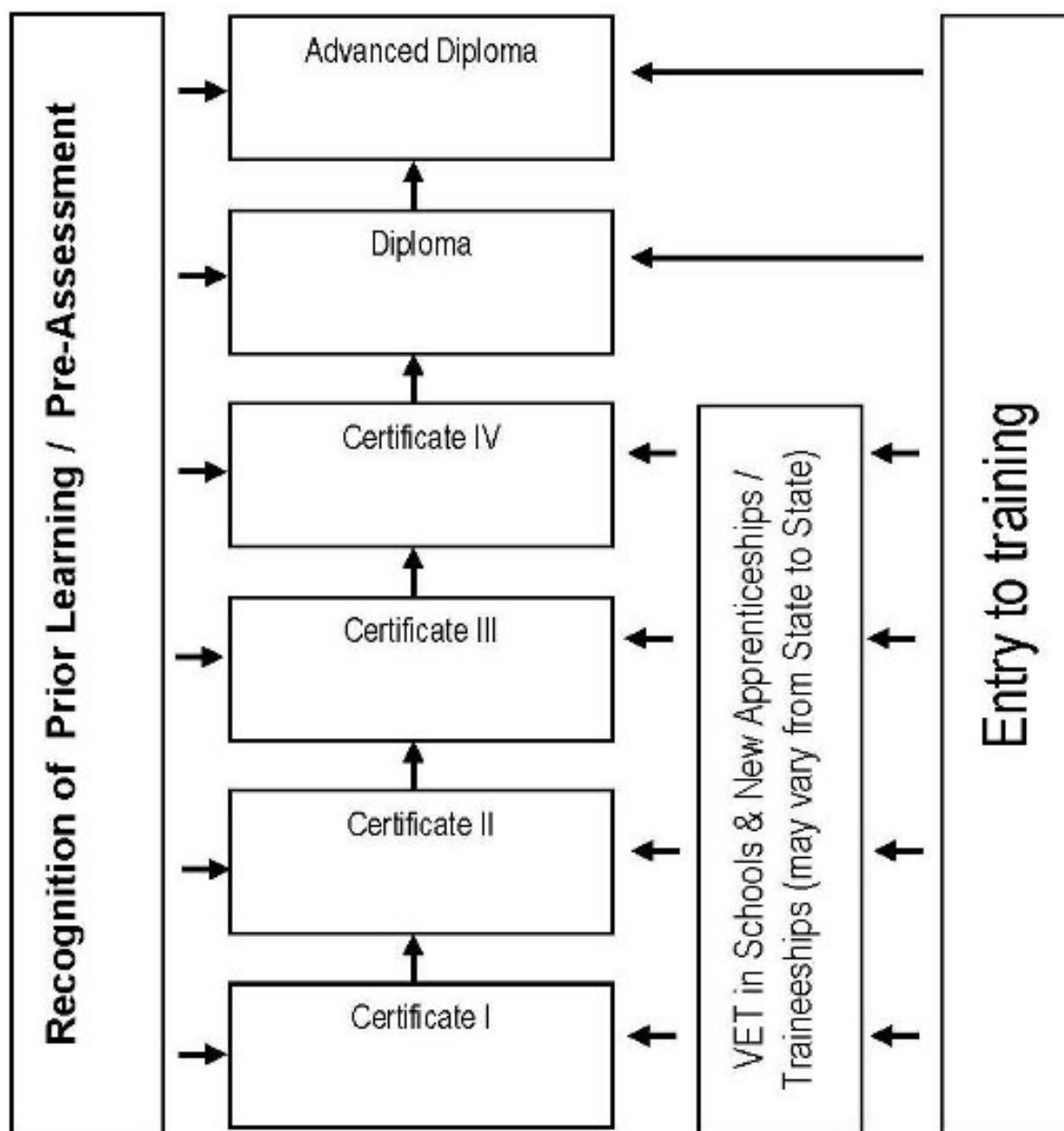
- Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major functions, both broad and within highly varied and highly specialised contexts.
- Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.
- Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.
- Demonstrate full responsibility and accountability for personal outputs.
- Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

Qualification pathways

RTE03 Rural Production Training Package is the framework for VET for those engaged in the agriculture and production horticulture industries. The Training Package supports a wide range of learning pathways. These include institution-based programs, workplace and school-based training, as well as other flexible combinations of workplace and off-the-job training and assessment.

Qualifications within RTE03 Rural Production Training Package can be achieved through a variety of pathways including new apprenticeships (traineeships).

The training pathways for qualifications contained within RTE03 Rural Production Training Package are illustrated below. For further advice about pathways and qualifications contact the Agri-food Industry Skills Council on telephone 02 6163 7200 or email reception@agrifoodskills.net.au.



Training pathways for Rural Production

RTE03 Rural Production Training Package qualifications and pathways for specialisation

RTE03 Rural Production Training Package contains qualifications and suggested pathways comprising groups of units from which choices can be made according to the specialisations being undertaken. The following is a full list of qualifications and specialisations.

RTE10103 Certificate I in Rural Operations

RTE20703 Certificate II in Rural Operations

RTE31903 Certificate III in Rural Operations - includes a suggested pathway for specialisation in fertiliser and soil ameliorant industry operations

RTE20103 Certificate II in Agriculture - includes suggested pathways for specialisation in:

- alpaca
- beef production
- beekeeping
- cotton production
- dairy production
- goat production
- grain production
- horse breeding
- milk harvesting
- pig production
- poultry production
- sheep and wool production
- sugar production

RTE30103 Certificate III in Agriculture - includes suggested pathways for specialisation in:

- alpaca
- beekeeping

RTE30203 Certificate III in Agriculture (Beef Production)

RTE30303 Certificate III in Agriculture (Cotton Production)

RTE30403 Certificate III in Agriculture (Dairy Production)

RTE30503 Certificate III in Agriculture (Goat Production)

RTE30603 Certificate III in Agriculture (Grain Production)

RTE30703 Certificate III in Agriculture (Horse Breeding)

RTE30803 Certificate III in Agriculture (Milk Harvesting)

RTE30903 Certificate III in Agriculture (Pig Production)

RTE31003 Certificate III in Agriculture (Poultry Production)

RTE31103 Certificate III in Agriculture (Sheep and Wool Production)

RTE31203 Certificate III in Agriculture (Sugar Production)

RTE40103 Certificate IV in Agriculture - includes suggested pathways for specialisation in:

- alpaca
- beef production
- beekeeping
- cotton production
- dairy production
- deer production
- goat production
- grain production
- horse breeding
- milk harvesting
- organic production
- pig production
- poultry production
- sheep and wool production
- sugar production

RTE50103 Diploma of Agriculture - includes suggested pathways for specialisation in:

- beef production
- beekeeping
- cotton production
- dairy production
- deer production
- goat production
- grain production
- horse breeding
- organic production
- pig production
- poultry production
- sheep and wool production
- sugar production

RTE60103 Advanced Diploma of Agriculture

RTE20807 Certificate II in Commercial Composting

RTE32107 Certificate III in Commercial Composting

RTE40707 Certificate IV in Commercial Composting

RTE50507 Diploma of Commercial Composting

RTE20203 Certificate II in Irrigation

RTE31303 Certificate III in Irrigation

RTE40203 Certificate IV in Irrigation

RTE50203 Diploma of Irrigation

RTE20303 Certificate II in Wool Handling

RTE31403 Certificate III in Wool Clip Preparation

RTE32003 Certificate III in Advanced Wool Handling

RTE40303 Certificate IV in Wool Classing

RTE20403 Certificate II in Shearing

RTE31503 Certificate III in Shearing

RTE40403 Certificate IV in Shearing

RTE20503 Certificate II in Crutching

RTE20603 Certificate II in Production Horticulture - includes suggested pathways for specialisations in:

- mushroom production
- olive production

RTE31603 Certificate III in Production Horticulture - includes suggested pathways for specialisations in:

- mushroom production
- olive production

RTE40503 Certificate IV in Production Horticulture - includes suggested pathways for specialisations in:

- mushroom production

- olive production

RTE50303 Diploma of Production Horticulture - includes suggested pathways for specialisation in:

- olive production

RTE60307 Advanced Diploma of Production Horticulture with pathway for specialisation in olive production

RTE31703 Certificate III in Rural Business

RTE31803 Certificate III in Rural Merchandising

RTE40603 Certificate IV in Rural Business

RTE50403 Diploma of Rural Business Management

RTE60203 Advanced Diploma of Rural Business Management

Accommodating the streams within each of these qualifications (Certificate I through to Advanced Diploma) has been achieved by developing three lists of units of competency in each stream:

- **Group A list** - These are the key technical work functions that have been designated for each sector specialisation. Units of competency that are compulsory for each qualification are shown in italics in this group.
- **Group B list** - These are the more generic work functions across a number of industry sectors.
- **Group C list** - These include units of competency from RTE03 Rural Production Training Package not listed in Group A or B at that level, and relevant units of competency from other Training Packages.

A qualification for each occupational stream is achieved by selecting units of competency from each of the above lists.

Units of competency imported from other Training Packages are known as cross-industry units of competency, and the rules attached to these units of competency from their originating Training Package must be adhered to when they are incorporated into training programs or assessments.

Common units

A group of units has been developed to describe competency in areas that are common across the Conservation and Land Management, Rural Production and Amenity Horticulture Training Packages. For convenience, these units are referred to as common units and are coded RTC, to distinguish them from units addressing competency relevant to some but not all industries, such as the RTD units that describe competency in the Conservation and Land Management industry. The common units are presented in one stand-alone volume.

Issuing qualifications

Under the agreed arrangements of the Australian Quality Training Framework (AQTF), only registered training organisations (RTOs) can issue qualifications and do so according to the AQTF Standards.

When a qualification is issued by an RTO, there will be an option to include the sector specialisation or occupational stream on the academic transcript, Statement of Attainment and the qualification parchment issued by the RTO.

Rules (Rural Production)

There is *generally one rule that can be found detailed in each qualification, for example:

For a Certificate II in Agriculture specialising in Pig Production, at least thirteen of the units of competency presented for this qualification must relate to pig production work procedures, activities or contexts.

This is designed to ensure that some eighty per cent of units of competency submitted for a qualification relate to the specialisation (pig production in the above example) and the integrity of the qualification is maintained.

* As a result of feedback from industry, this rule excludes the following eight qualifications:

RTE20303 Certificate II in Wool Handling

RTE31403 Certificate III in Wool Clip Preparation

RTE32003 Certificate III in Advanced Wool Handling

RTE40303 Certificate IV in Wool Classing

RTE20403 Certificate II in Shearing

RTE31503 Certificate III in Shearing

RTE40403 Certificate IV in Shearing

RTE20503 Certificate II in Crutching.

Context of assessment for competency standards

Due to the large number of generic units of competency in this Training Package, including imported units and those that are common with the Conservation and Land Management and Amenity Horticulture Training Packages, there may be a need to indicate the context in which the units of competency have been assessed.

As an example, consider *RTE2030A Assist agricultural crop harvesting*. This unit may refer to harvesting a crop in the cotton, grains or sugar cane sectors. Where the unit is related to the sugar cane sector, the registered training organisation may make a notation in the Competency Record Book to indicate the context in which the unit was achieved.

In this example, the context of assessment for sugar cane would include:

- assisting with field work
- monitoring cane production
- maintaining and operating equipment such as tractors
- cane harvesting
- cane haulage.

Statements of Attainment

Individuals who are assessed against one or a number of the units of competency set out within a qualification are entitled to receive a Statement of Attainment that recognises partial achievement of a full qualification.

For example, a student may have completed the following units of competency contained within the Certificate II in Agriculture:

RTE2129A Move and handle pigs

RTE2111A Identify and mark animals

RTE2133A Artificially inseminate pigs

RTE2143A Mate pigs and monitor dry sow performance

In this case, the student's Statement of Attainment could note:

In partial completion of the following qualification:

Certificate II in Agriculture

specialising in Pig Production

Skill Sets

Definition

Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

Wording on Statements of Attainment

Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.

Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording 'these competencies meet [the relevant skill set title or industry need is included]' on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package.

All Statements of Attainment must include the wording 'A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from a nationally recognised qualification'. The following may also be used 'these competencies form part of the [the relevant qualification(s) code and title are inserted]'.

This section below provides information on skill sets within this Training Package, with the following important disclaimer: **Readers should ensure that they have also read the part of the Training Package that outlines licensing and regulatory requirements.**

Skill Sets in this Training Package

Where this section is blank, nationally recognised skill sets have yet to be identified in this industry.

Assessment Guidelines

Introduction

These Assessment Guidelines provide the endorsed framework for assessment of units of competency in this Training Package. They are designed to ensure that assessment is consistent with the Australian Quality Training Framework (AQTF) *Standards for Registered Training Organisations*. Assessments against the units of competency in this Training Package must be carried out in accordance with these Assessment Guidelines.

Assessment System Overview

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF requirements; licensing/registration requirements; and assessment pathways.

Benchmarks for Assessment

Assessment within the National Training Framework is the process of collecting evidence and making judgements about whether competency has been achieved to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the relevant endorsed unit of competency.

In the areas of work covered by this Training Package, the endorsed units of competency are the benchmarks for assessment. As such, they provide the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

Australian Quality Training Framework Assessment Requirements

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirements of the AQTF as expressed in the *Standards for Registered Training Organisations*.

The *Standards for Registered Training Organisations* can be downloaded from the DEST website at www.dest.gov.au or can be obtained in hard copy from DEST. The following points summarise the assessment requirements under the AQTF.

Registration of Training Organisations

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering/Course Accrediting Body in accordance with the *Standards for Registered Training Organisations*. The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration. See Section 1 of the *Standards for Registered Training Organisations*.

Quality Training and Assessment

Each RTO must have systems in place to plan for and provide quality training and assessment across all its operations. See Standard 1 of the *Standards for Registered Training Organisations*.

Assessor Competency Requirements

Each person involved in training, assessment or client service must be competent for the functions they perform. See Standard 7 of the *Standards for Registered Training Organisations* for assessor competency requirements. Standard 7 also specifies the competencies that must be held by trainers.

Assessment Requirements

The RTOs assessments must meet the requirements of the endorsed components of Training Packages within its scope of registration. See Standard 8 of the *Standards for Registered Training Organisations*.

Assessment Strategies

Each RTO must identify, negotiate, plan and implement appropriate learning and assessment strategies to meet the needs of each of its clients. See Standard 9 of the *Standards for Registered Training Organisations*.

Mutual Recognition

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See Standard 5 of the *Standards for Registered Training Organisations*.

Access and Equity and Client Services

Each RTO must apply access and equity principles, provide timely and appropriate information, advice and support services that assist clients to identify and achieve desired outcomes. This may include reasonable adjustment in assessment. See Standard 6 of the *Standards for Registered Training Organisations*.

Partnership Arrangements

RTOs must have, and comply with, written agreements with each organisation providing training and/or assessment on its behalf. See Standard 1.6 of *Standards for Registered Training Organisations*.

Recording Assessment Outcomes

Each RTO must have effective administration and records management procedures in place, and must record AQF qualifications and Statements of Attainment issued. See Standards 4 and 10.2 of the *Standards for Registered Training*.

Issuing AQF Qualifications and Statement of Attainment

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the *AQF Implementation Handbook* and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued where the individual is assessed as competent against fewer units of competency than required for an AQF qualification. See Standard 10 and Section 2 of the *Standards for Registered Training Organisations*.

This section provides information on licensing/registration requirements for this Training Package, with the following important disclaimer.

Licensing and registration requirements that apply to specific industries, and vocational education and training, vary between each State and Territory, and can regularly change. The developers of this Training Package, and DEST, consider that the licensing/registration requirements described in this section apply to RTOs, assessors or candidates with respect to this Training Package. While reasonable care has been taken in its preparation, the developers of this Training Package and DEST cannot guarantee that the list is definitive or accurate at the time of reading; the information in this section is provided in good faith on that basis.

Contact the relevant state or territory department(s) to check if the licensing/registration requirements described below still apply, and to check if there are any others with which you must comply. For further information contact www.agrifoodskills.net.au.

Requirements for assessors

Some individual units of competency may be subject to licensing arrangements before training is commenced or before undertaking related work in the industry. Other units may require licences for those responsible for delivery and assessment. Competency standards where licensing arrangements may be relevant include those dealing with:

- operating vehicles, machinery and equipment such as chainsaws, motor vehicles, tractors, forklifts and earthmoving machinery
- driving or transporting machinery and equipment on public roads
- firearms
- chemical purchase and use
- access to and activities on private or protected lands
- management activities related to particular animal and plant species
- waste water
- soil disturbance and conservation
- irrigation
- water allocations
- underground water
- landscape construction
- natural bush clearing.

Requirements for RTOs

Selected units of competency and qualifications in this Training Package provide the basis for a range of statutory licensing and industry registration arrangements. To satisfy these licensing and registration arrangements, RTOs must meet those additional requirements.

Requirements for candidates

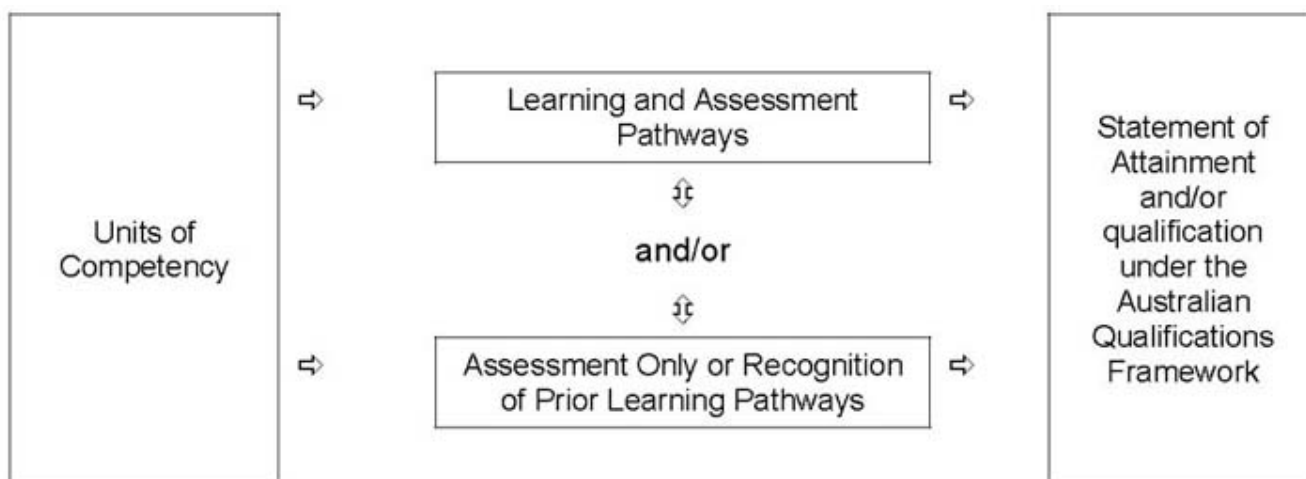
Individuals being assessed under statutory licensing and industry registration systems must comply with training and experience requirements additional to the minimum requirements identified in this Training Package.

Pathways

The competencies in this Training Package may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.



Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired.

Assessment, by any pathway, must comply with the assessment requirements set out in the *Standards for Registered Training Organisations*.

Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit New Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

Assessment-Only or Recognition of Prior Learning Pathway

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were achieved.

In an assessment-only or Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor, such as in the compilation of portfolios; or directed by the assessor, such as through observation of workplace performance and skills application, and oral and/or written assessment. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of Standard 8.2 of the *Standards for Registered Training Organisations* must be met.

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, and work samples. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the relevant endorsed unit of competency)
- reliable (shows that the candidate consistently meets the endorsed unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency), and
- sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).

The assessment only or recognition of prior learning pathway is likely to be most appropriate in the following scenarios:

- candidates enrolling in qualifications who want recognition for prior learning or current competencies
- existing workers
- individuals with overseas qualifications
- recent migrants with established work histories
- people returning to the workplace, and
- people with disabilities or injuries requiring a change in career.

Combination of Pathways

Where candidates for assessment have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

Assessor Requirements

This section identifies the mandatory competencies for assessors, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

Assessor Competencies

The *Standards for Registered Training Organisations* specify mandatory competency requirements for assessors. For information, Standard 7.3 from the *Standards for Registered Training Organisations* follows:

7.3	a	The RTO must ensure that assessments are conducted by a person who has:
		• the following competencies* from the Training Package for Assessment and Workplace Training, or demonstrated equivalent competencies: • TAAASS401A Plan and organise assessment; • TAAASS402A Assess competence; • TAAASS404A Participate in assessment validation; • relevant vocational competencies, at least to the level being assessed.
	b	However, if a person does not have all of the competencies in Standards 7.3 a (i) and the vocational competencies as defined in 7.3 a (ii), one person with the competencies listed in Standard 7.3 a (i), and one or more persons who have the competencies listed in Standard 7.3 a (ii) may work together to conduct assessments.

		* A person who holds the competencies BSZ401A Plan assessment, BSZ402A Conduct assessment, and BSZ403A Review assessment from the Training Package for Assessment and Workplace Training will be accepted for the purposes of this standard. A person who has demonstrated equivalent competencies to BSZ401A and BSZ402A and BSZ403A in the period up to 12 months following publication of the Training and Assessment Training Package will also be accepted for the purposes of this standard.

Designing Assessment Tools

This section provides an overview on the use and development of assessment tools.

Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these are benchmarked, or mapped, against the current version of the relevant unit of competency. This can be done by checking that the materials are listed on the National Training Information Service (<http://www.ntis.gov.au>). Materials on the list have been noted by the National Quality Council as meeting their quality criteria for Training Package support materials.

Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the validation of assessment strategies as required under 9.2 (i) of the *Standards for Registered Training Organisations*
- meet the assessment requirements expressed in the *Standards for Registered Training Organisations*, particularly Standards 8 and 9.

A key reference for assessors developing assessment tools is TAA04 Training and Assessment Training Package and the unit of competency TAAASS403A *Develop assessment tools*. There is no set format or process for the design, production or development of assessment materials.

Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

Mandatory Assessment Requirements

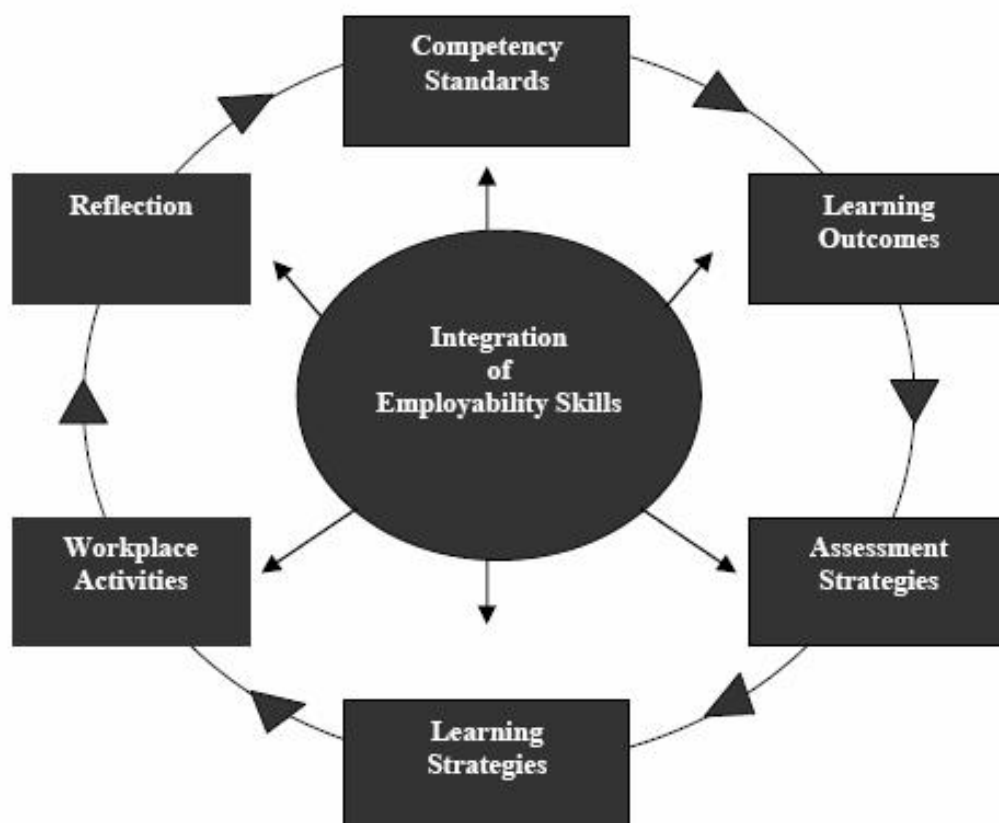
Assessments must meet the criteria set out in Standard 8 from the *Standards for Registered Training Organisations*. For information, Standard 8 from the *Standards for Registered Training Organisations* is reproduced below.

8	RTO Assessments

		The RTOs assessments meet the requirements of the endorsed components of Training Packages and the outcomes specified in accredited courses within the scope of its registration.
8.1		The RTO must ensure that assessments (including RPL):
	i.	comply with the assessment guidelines included in the applicable nationally endorsed Training Packages or the assessment requirements specified in accredited courses;
	ii.	lead to the issuing of a statement of attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed unit(s) of competency in the applicable Training Package or modules specified in the applicable accredited course;
	iii.	are valid, reliable, fair and flexible;
	iv.	provide for applicants to be informed of the context and purpose of the assessment and the assessment process;
	v.	where relevant, focus on the application of knowledge and skill to standard of performance required in the workplace and cover all aspects workplace performance, including task skills, task management skills, contingency management skills and job role environment skills;
	vi.	involve the evaluation of sufficient evidence to enable judgements to be made about whether competency has been attained;
	vii.	provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options in relation to those outcomes;
	viii.	are equitable for all persons, taking account of individual needs relevant to the assessment; and
	ix.	provide for reassessment on appeal.
8.2	a	The RTO must ensure that RPL is offered to all applicants on enrolment
	b	The RTO must have an RPL process that:
		i. is structured to minimise the time and cost to applicants; and ii. provides adequate information, support and opportunities for participants to engage in the RPL process.

Delivery and assessment of Employability Skills

Employability Skills are integral to workplace competency and, as such, must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.



Training providers must analyse the Employability Skills information contained in units of competency in order to design valid and reliable learning and assessment strategies. This analysis includes:

- reviewing unit(s) of competency to determine how each relevant Employability Skill is found and applied within the unit
- analysing the Employability Skills Summary for the qualification in which the unit(s) is/are packaged to help clarify relevant industry/workplace contexts with regard to the application of Employability Skills at that qualification level
- designing learning and assessment activities that address the Employability Skills requirements.

For more information on Employability Skills in Agri-Food Industry Skills Council Training Packages go to the Agri-Food Industry Skills Council website at <http://www.agrifoodskills.net.au>.

Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities. Adjustments include any changes to the assessment process or context that meet the individual needs of the person with a disability, but do not change competency outcomes. Such adjustments are considered reasonable if they do not impose an unjustifiable hardship on a training provider or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.

Further Sources of Information

The section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

Contacts

Contacts

Agri-food Industry Skills Council

7 National Circuit

BARTON ACT 2600

PO Box 5450

KINGSTON ACT 2604

Telephone: (02) 6163 7200

Fax: (02) 6163 7278

Web: www.agrifoodskills.net.au

Email: info@agrifoodskills.net.au

TVET Australia Ltd

Level 21, 390 St Kilda Road

MELBOURNE VIC 3004

PO Box 12211

A'Beckett Street Post Office

MELBOURNE VIC 8006

Telephone: (03) 9832 8100

Fax: (03) 9832 8199

Web: www.atpl.net.au

Email: sales@atpl.net.au

Innovation and Business Industry Skills Council

Building B, Level 2

192 Burwood Road

HAWTHORN VIC 3122

Telephone: (03) 9815 7000

Fax: (03) 9815 7001

Email: virtual@ibsa.org.au

General Resources

Refer to <http://antapubs.dest.gov.au/publications/search.asp> to locate the following ANTA publications.

AQF Implementation Handbook, third Edition. Australian Qualifications Framework Advisory Board, 2002, aqf.edu.au

Australian Quality Training Framework (AQTF) - for general information go to:

www.dest.gov.au/sectors

Australian Quality Training Framework (AQTF) - for resources and information go to:
www.dest.gov.au

Australian Quality Training Framework *Standards for Registered Training Organisations*, Australian National Training Authority, Melbourne, 2005. Available in hard copy from State and Territory Training Authorities or can be downloaded from www.dest.gov.au

TAA04 Training and Assessment Training Package. This is available from the Innovation and Business Skills Australia (IBSA) Industry Skills Council and can be viewed, and components downloaded, from the National Training Information Service (NTIS). National Training Information Service, an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - www.ntis.gov.au *Style Guide for Training Package Support Materials*, Australian National Training Authority, Melbourne, 2003. Can be downloaded from the ANTA page at www.dest.gov.au

Assessment Resources

Training Package Assessment Guides - a range of resources to assist RTOs in developing Training Package assessment materials developed by DEST with funding from the Department of Education, Training and Youth Affairs. It is made up of 10 separate titles, as described at the ANTA publications page of www.dest.gov.au. Go to www.resourcegenerator.gov.au/loadpage.asp?TPAG.htm

Printed and/or CD ROM versions of the Guides can be purchased from Australian Training Products (ATP). The resource includes the following guides:

- 1 Training Package Assessment Materials Kit
- 2 Assessing Competencies in Higher Qualifications
- 3 Recognition Resource
- 4 Kit to Support Assessor Training
- 5 Candidates Kit: Guide to Assessment in New Apprenticeships
- 6 Assessment Approaches for Small Workplaces
- 7 Assessment Using Partnership Arrangements
- 8 Strategies for ensuring Consistency in Assessment
- 9 Networking for Assessors
- 10 Quality Assurance Guide for Assessment

An additional guide "Delivery and Assessment Strategies" has been developed to complement these resources.

Assessment Tool Design and Conducting Assessment

VETASSESS & Western Australian Department of Training and Employment 2000, *Designing Tests - Guidelines for designing knowledge based tests for Training Packages*. Vocational Education and Assessment Centre 1997, *Designing Workplace Assessment Tools, A self-directed learning program*, NSW TAFE.

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Assessor Training

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Assessment System Design and Management

Office of Training and Further Education 1998, *Demonstrating best practice in VET project - assessment systems and processes*, OTFE Victoria.

Toop, L., Gibb, J. & Worsnop, P. *Assessment system designs*, Australian Government Publishing Service, Canberra.

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RTE3002A

Unit Descriptor

Co-ordinate a crop regulation program

This competency standard covers the process of co-ordinating a crop regulation program in which thinning and pruning of flower, fruit or vegetable crops is undertaken to control yield and quality. Crop regulation methods may include manual thinning, chemical thinning, selective harvesting, training, summer and winter pruning, hedging, skirting, topping and trimming. Irrigation and plant nutrition programs are covered in other units of competency.

Co-ordinating a crop regulation program is likely to be carried out under limited supervision from others with checking only related to overall progress. The work requires the application of horticultural knowledge and a broad range of horticultural skills. Co-ordination is usually carried out within established routines, methods and procedures where some discretion and judgement are required in the selection of equipment and materials, organisation of work and the achievement of outcomes within time and budgetary constraints.

Unit Sector No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for the crop regulation program	1.1 The site and operational requirements of the crop regulation program are identified according to the site plan and enterprise work procedures . 1.2 Crop regulation materials are selected according to enterprise work procedures. 1.3 Services are located using site plans and in consultation with the supervisor. 1.4 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.5 Suitable safety and personal protective equipment (PPE) are selected, used and maintained.
2. Prepare crop regulation equipment	2.1 Tools, equipment and machinery are selected according to enterprise work procedures. 2.2 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 2.3 Tools, equipment and machinery are calibrated and adjusted according to manufacturers guidelines and enterprise work procedures.

- 3. Implement the crop regulation program
 - 3.1 Enterprise work team and contractors are identified and work tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor.
 - 3.2 Work pattern is planned to cover the site in an efficient, sequential and co-ordinated manner according to enterprise work procedures.
 - 3.3 Crop regulation tasks are undertaken according to **OHS requirements** and with due consideration of the **environmental implications**.
 - 3.4 Crop regulation tasks are monitored and remedial action is undertaken where necessary to achieve program objectives.
 - 3.5 A **clean and safe work area** is maintained throughout and on completion of work.
- 4. Complete crop regulation activities
 - 4.1 **Waste material** is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures.
 - 4.2 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures.
 - 4.3 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information relating to crop regulation activities and problems encountered will be required with the work group, supervisor and contractors.	1
Collecting analysing and organising information	Enterprise work procedures and site plan should be consulted, interpreted and applied to co-ordinate crop regulation activities with further clarification sought from the supervisor when necessary.	1
Planning and organising activities	Work activities for the work group, contractors and self will be planned prior to and adjusted during the crop regulation program.	1
Working with others and in teams	The crop regulation program will involve facilitating and leading members of a team to complete the program on time and budget.	2
Using mathematical ideas and techniques	Mathematical application will be required to calculate the spatial and logistical requirements of the crop regulation program.	1
Solving problems	Site contingencies, personnel difficulties and timeline failures may require problem-solving techniques.	1
Using technology	Technological understanding will be required to use crop regulation tools, equipment and machinery, undertake crop regulation activities, communicate and keep records.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available.

What tasks may be undertaken in the crop regulation program?

The program may include manual thinning, chemical thinning, selective harvesting, training, summer and winter pruning, hedging, skirting, topping and trimming.

What enterprise work procedures may apply to this standard?	Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, crop regulation program, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes, product labels and Material Safety Data Sheets (MSDS), manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.
What crop regulation materials may be selected for the program?	Materials may include thinning agents, growth hormones and retardants, and trellising and training materials.
What services may need to be located?	Services may include water supply, gas, power (electricity), telecommunications, irrigation, stormwater and drainage.
What OHS hazards may be associated with the crop regulation program?	Hazards may include disturbance or interruption of services, solar radiation, dust, noise, soil and air-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, moving vehicles, machinery and machinery parts, uneven surfaces and flying objects.
What safety equipment may be required?	Safety equipment may include signage and barriers.
What PPE may be required when regulating crops?	PPE may include hat, boots, overalls, gloves, spray clothing, goggles, respirator or face mask, face guard, hearing protection, sunscreen lotion and hardhat.
What tools, equipment and machinery may be required for the crop regulation program?	Application equipment and machinery may include backpack spray equipment; tractors and trailed or 3-point linkage spray equipment, pumps and pump fittings. Pruning tools, equipment and machinery may include knives, handsaws, hand and battery-powered secateurs, pneumatic snips and compressor, hedge trimmers both manual and powered, small chainsaws, specialised mechanical pruning machinery, chippers, ladders, picking platforms, powered ladders and scissor lifts. Plant training equipment may include trellising and specialised training systems.

What OHS requirements may be relevant to this standard?

OHS requirements may include identifying hazards, assessing risks and implementing controls, cleaning, maintaining and storing tools, equipment and machinery, appropriate use of PPE including sun protection, safe operation of tools, equipment and machinery, safe handling, use and storage of chemicals and hazardous substances, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.

What environmental implications may be associated with the regulation of crops?

Detrimental environmental impacts may arise where crop regulation activities produce excess noise, dust or water run-off, or off-site ground water or soils are contaminated from solids, debris, nutrients, chemicals and water run-off.

How may a clean and safe work area be maintained?

Tasks may include disabling unused tools, equipment and machinery and storing neatly out of the way of crop regulation activities, safely storing materials on site, using signage and safety barriers during and removing after crop regulation activities are completed, and swiftly and efficiently removing and processing debris and waste from the work area.

What waste material may be relevant to this standard?

Waste material may include plant debris, litter and broken components.

Plant-based material may be mulched or composted, plastic, metal, paper-based materials may be recycled, re-used, returned to the manufacturer or disposed of according to enterprise work procedures.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in co-ordinating a crop regulation program requires evidence that a person is able to prepare for crop regulation activities, co-ordinate work groups and implement crop regulation activities to achieve enterprise crop production targets in terms of yield and quality.

The skills and knowledge required to co-ordinate a crop regulation program must be transferable to a different work environment. For example, this could include different crops, canopy management requirements and workplaces.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- principles of thinning and pruning and the methods used to achieve crop regulation goals
- effects on plant growth, habit and production levels of thinning and pruning operations in relation to the market goals of the enterprise
- enterprise quality procedures and characteristics of a crop relative to varying market requirements.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate orally and in writing with work team members, supervisors and contractors
- utilise proforma recording, reporting and work procedure documents
- interpret site plans and crop regulation specifications
- measure quantities, calculate material requirements, area, volume, ratios and application rates, and calibrate machinery
- co-ordinate work group, contractors and own activities
- monitor enterprise plants for quality
- minimise noise, dust, high activity vehicle traffic and water run-off to prevent nuisance-level environmental disturbance.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3003A

Unit Descriptor

Co-ordinate horticultural crop harvesting

This competency standard covers the process of co-ordinating harvesting activities for horticultural crops including preparing for harvest, maintaining harvest requirements, monitoring crop quality and delivering the crop.

Co-ordinating crop harvesting is likely to occur under limited supervision with checking only related to overall progress. Co-ordinating crop harvesting requires the application of extensive horticultural knowledge and a broad range of horticultural skills. Co-ordinating crop harvesting is normally done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for crop harvesting	1.1 The crop to be harvested and the requirements and procedures to assure crop quality are identified according to enterprise work procedures. 1.2 Crop maturity is determined by experience, specification charts, aids or devices and according to client, enterprise and industry quality assurance specifications. 1.3 Suitable weather conditions for picking are established according to enterprise work procedures. 1.4 Tools, equipment and machinery are selected according to harvest requirements and enterprise work procedures. 1.5 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 1.6 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.7 Suitable safety and personal protective equipment (PPE) are selected, used and maintained.

2. Co-ordinate harvesting activities	2.1 The crop to be harvested and the requirements and procedures to assure crop quality are identified according to enterprise work procedures. 2.2 Crop maturity is determined by experience, specification charts, aids or devices and according to client, enterprise and industry quality assurance specifications. 2.3 Suitable weather conditions for picking are established according to enterprise work procedures. 2.4 Tools, equipment and machinery are selected according to harvest requirements and enterprise work procedures. 2.5 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 2.6 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 2.7 Suitable safety and personal protective equipment (PPE) are selected, used and maintained.
3. Maintain harvest requirements	3.1 Enterprise tools, equipment and machinery are maintained in effective working order throughout the harvest to enable smooth operations and minimise downtime. 3.2 Harvest workers are provided with sufficient tools, equipment and machinery to match harvest output and to prevent unnecessary interruptions. 3.3 Full containers are removed, emptied into or loaded onto transport vehicles as soon as possible after harvesting to minimise deterioration of the crop.
4. Monitor crop quality throughout harvest	4.1 PPE is selected, maintained and used according to OHS procedures. 4.2 Harvesting procedures and the harvested crop comply with client, enterprise and industry quality assurance specifications. 4.3 The crop is handled carefully to prevent damage according to enterprise work procedures. 4.4 Sorting and grading of the crop complies with client, enterprise and industry quality assurance specifications. 4.5 Crop storage minimises postharvest deterioration according to enterprise work procedures. 4.6 The crop is transported with minimum damage according to enterprise work procedures. 4.7 Picking tallies or harvest yields are calculated and recorded according to enterprise work procedures.
5. Deliver crop to specified destination	5.1 Delivery details including quantity, timing and destination are confirmed according to enterprise work procedures. 5.2 Crop is delivered with damage levels that are within client, enterprise and industry quality assurance specifications. 5.3 Delivered crop complies with client, enterprise and industry quality assurance specifications. 5.4 Delivery documentation is completed accurately according to enterprise work procedures.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information relating to harvesting activities and problems encountered will be required with the work group, supervisor, contractors and clients.	2
Collecting analysing and organising information	Enterprise work procedures and quality specifications should be consulted, interpreted and applied to co-ordinate harvesting activities with further clarification sought from the supervisor when necessary.	2
Planning and organising activities	Daily work activities for the work group, contractors and self will be planned prior to and adjusted during the harvest program.	2
Working with others and in teams	The harvesting program will involve facilitating and leading members of a team to complete the harvest on time and budget.	2
Using mathematical ideas and techniques	Mathematical application will be required to calculate the logistical requirements of the harvest program, yields, percentage deterioration of crops, tallies and working hours.	2
Solving problems	Site contingencies, adverse weather, machinery breakdown, contractual and personnel difficulties, and timeline failures may require problem-solving techniques.	2
Using technology	Technological understanding will be required to access and apply harvest specifications, undertake harvesting activities, communicate, report and keep records.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available.

What types of crop may be harvested?

Crops may include fruit, vegetables, herbs, flowers, foliage, bulbs, tubers, nuts, mushrooms, wild harvest plants and oils.

How may the crop be harvested?

The crop may be harvested manually or mechanically.

What enterprise work procedures may apply to this standard?	Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, the harvest plan, program and schedule, quality assurance policy and plan, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; product labels and Material Safety Data Sheets (MSDS); manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.
How is crop maturity determined?	Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, the harvest plan, program and schedule, quality assurance policy and plan, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; product labels and Material Safety Data Sheets (MSDS); manufacturers service specifications and operators manuals; waste disposal, recycling and re-use guidelines; and OHS procedures.
What clients may be relevant to this standard?	Clients may include the enterprise, packers, wholesalers, retailers, processors and exporters.
What weather conditions may affect the harvesting of the crop?	Clients may include the enterprise, packers, wholesalers, retailers, processors and exporters.
What tools, equipment and machinery may be used to carry out crop harvesting activities?	Tools, equipment and machinery may include secateurs, knives, maturity testing equipment, specification charts, gloves, bags, ladders, tractors, trailers, forklifts, powered ladders, mechanical harvesters, pallets, containers, cartons, trays, net bags, buckets, dip tins, bulk bins, gondolas, trucks and trailers for transport of bulk produce, grading machinery, cutting machines, coolrooms, gassing chambers and labelling devices.
What OHS hazards may be associated with co-ordinating harvest activities?	Hazards may include solar radiation, dust, noise, soil and air-borne micro-organisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, ladders, moving vehicles, machinery and machinery parts, slippery or uneven surfaces, potholes and flying objects.
What safety equipment may be required?	Safety equipment may include signage and barriers.
What PPE may be required when harvesting horticultural crops?	PPE may include hat, boots, overalls, gloves, goggles, respirator or face mask, face guard, hearing protection, sunscreen lotion and hard hat.

What OHS requirements may be relevant to this standard?

OHS requirements may include identifying hazards, assessing risks and implementing controls, cleaning, maintaining and storing tools, equipment and machinery, appropriate use of personal protective equipment including sun protection, safe operation of tools, equipment and machinery; safe handling, use and storage of chemicals and hazardous substances, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.

What environmental implications may be associated with co-ordinating horticultural crop harvesting activities?

Detrimental environmental impacts may arise where harvesting activities produce excess noise, dust or water run-off.

What harvest records may be required by the enterprise?

Harvest records may include harvest workers tallies or working hours, written harvest instructions, dates of harvest, withholding periods (time since last chemical spray), crop yield from each section, weather conditions during harvest, percentage crop deterioration, maturity measurements taken, storage conditions, machinery settings or adjustments, machinery repairs and maintenance, dispatch details and delivery dockets.

How may a clean and safe work area be maintained?

Tasks may include disabling unused tools, equipment and machinery and storing neatly out of the way of harvest activities, safely storing harvest materials on site, using signage and safety barriers during and removing after mechanical harvesting activities are completed, and swiftly and efficiently removing and processing debris and waste from the work area.

How may damage to the crop be incurred if it is incorrectly handled?

Damage may occur during mechanical harvesting by rods, beaters, shakers, blades, belts, chains, wheels and other moving machinery parts, during manual harvesting by long fingernails, tearing or cutting the crop when picking, bruising or squashing the crop when dropping or tipping it into containers, and overfilling containers. Protruding nails, splinters or rotting, unemptied crop in containers may damage the crop, as may driving too fast or roughly, leaving filled containers in the sun too long, frost damage when full containers are left out overnight and not separating varieties.

What sorting and grading requirements may be monitored?

Sorting and grading may include removing out of type plants, or physically damaged, unhealthy, rotten or immature produce. The crop may be graded according to variety, size, length, colour, maturity, blemishes, bud count and quality, which are subject to seasonal and market forces. Crop in doubt is checked with supervisors. Any out-of-standard produce should be disposed of according to enterprise policy.

What storage conditions may be relevant from the time of harvest until delivery to the client?

Storage requirements may include high humidity, cold temperature and controlled atmosphere storage, supplying produce with water after harvest e.g., asparagus and roses, controlling gases and temperature in storage to speed up maturity e.g., ethylene gas to ripen bananas and improve the colour of citrus, and coating with wax or wrapping in plastic.

How may the crop be transported?

The crop may be transported by trailer, forklift, truck or other specialised methods of transport.

What destinations may be relevant to this standard?

The crop may be transported by trailer, forklift, truck or other specialised methods of transport.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in co-ordinating crop harvesting requires evidence that a person can prepare for crop harvesting activities, maintain harvest requirements, monitor crop quality throughout harvest and deliver the crop according to quality specifications.

The skills and knowledge required to co-ordinate crop harvesting must be transferable to a different work environment. For example, a person who can co-ordinate crop harvesting on a property producing citrus should be able to transfer that knowledge and skill to another workplace although different crops, such as winegrapes, may be present.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- recognition of the maturity parameters of a range of crops
- enterprise quality procedures and characteristics of a crop relative to varying market requirements
- grading characteristics of each crop
- the importance of maintaining quality of produce including cooling requirements and quick transport from field to processing areas
- industry wage rates and conditions, contractors services, conditions and rates
- licensing requirements for use of forklifts, trucks and machinery
- the effect of adverse climatic conditions (e.g., rain, hail, extreme wind, or very high ultraviolet radiation), which may prevent or impede crop harvesting operations, or severely influence the time taken to complete the tasks necessary to fulfil the operation.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate ideas and information to work team members, supervisors, contractors and clients
- utilise proforma reporting, analysis and work procedure documents, and interpret quality specifications
- measure materials, interpret harvest specifications and schedules, interpret and apply test results, calculate tallies, working hours, yields and quality results
- co-ordinate work group, contractors and own activities to sequentially and effectively complete harvest in a timely and cost effective manner.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3006A**Establish pastures and crops for livestock production****Unit Descriptor**

This competency standard covers the functions required to establish pastures and crops for livestock production.

It requires the application of skills and knowledge to produce the maximum sustainable production of quality pasture and fodder to best match livestock needs. The work is likely to be carried out under broad supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Assess resources of pasture and crops	1.1 Total pasture capacity of the property is determined according to the production plan . 1.2 Measurement and assessment of soil moisture is undertaken to calculate soil water percentage and recorded according to enterprise requirements . 1.3 Crop and pasture nutrients are assessed and recorded according to enterprise requirements. 1.4 Fodder crop production potential is assessed according to the production plan. 1.5 Pasture and crop establishment program is prepared to meet production requirements and enterprise objectives.
2. Implement pasture and crop establishment program	2.1 Performance targets for growth of pastures and crops are determined according to establishment program. 2.2 Pasture species are selected to deliver planned land use according to enterprise objectives. 2.3 Grass and legume components are selected to deliver appropriate pasture mix for livestock. 2.4 Pre-treatment (including inoculation) of seed is carried out prior to sowing where required. 2.5 Sowing methods are selected and undertaken appropriate to pasture species to maximise pasture survival. 2.6 Fertilisers are applied according to crop/pasture needs and enterprise requirements. 2.7 Machinery and equipment are selected for soils of property and operated according to manufacturers instructions, OHS and enterprise requirements.
3. Manage fodder production	3.1 Livestock are used to control stubble and fallow weeds as part of an integrated pest management program. 3.2 Grazing program ensures high production levels and sound pasture regrowth. 3.3 Grazing of crops and pastures is carefully controlled during pasture and crop establishment. 3.4 Grazing is managed to minimise damage to soil structure and to prevent erosion according to sustainable land management practices.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to the soil tests results and analysis may be discussed with industry network and work team.	3
Collecting analysing and organising information	Information on the grazing management programs may be documented and organised by reports for analysis.	3
Planning and organising activities	Pest control applications may be planned and arranged around other crop management procedures or sequenced as required.	3
Working with others and in teams	In the implementation of effective methods and procedures to manage the establishment of pastures and crops for livestock production.	3
Using mathematical ideas and techniques	Calculation techniques may be used to determine dimensions and quantities.	3
Solving problems	Problems may arise in the course of the program that needs to be addressed through adjustments of resources or timetables.	3
Using technology	Technology may be used to monitor and calculate the results of the pastures and crops program.	3

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What factors affecting total pasture capacity may be relevant to this standard?

Factors may include climate, irrigation availability, stocking rates, soil types, and pasture pests, topography, soil and plant nutrient status, paddock history and drainage.

What information may be included in a production plan?

The crop production plan may include details of management strategies, budgetary considerations, paddock histories, rotations, fallowing regimes, fertiliser regimes, irrigation programs, and conservation earthworks.

What enterprise requirements may apply to this standard?	Standard operating procedures (SOPs), industry standards, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use) and reporting requirements. It may also include consideration of the following factors: • the introduction of transgenic varieties to minimise chemical use • the industry commitment to minimise pesticide use • containing pesticides to the pesticide site • selecting pesticides with minimal environmental impact.
How may nutrients be assessed?	Nutrients may include nitrogen, phosphorus, potassium, sulphur, calcium, magnesium, boron, molybdenum, copper, and chlorine. Nutrient requirements may be assessed by tissue or soil testing.
What may be involved in a pasture and crop establishment program?	Pasture and crop establishment programs may include establishment in virgin ground, establishment after a cropping program, replacement of run down pasture, changing the composition of pastures, growing fodder crops, growing cash crops, and re-establishing pastures after earthworks.
What types of pastures species may be selected?	Pasture species may include perennials such as phalaris, rye grass, and strawberry clover. Annual grasses such as rye, grass, cereals. Annual legumes such as medics and subterranean clover.
What considerations may be involved in the selection of a pasture species?	Selection of pasture species depends on the climate, soil pH and stock types.
What methods of sowing pastures may be selected?	Methods may include under sowing, direct drilling, band seeders and broadcasting seed into stubbles and trampling seed into ground with livestock.
What range of machinery and equipment may be selected?	Cultivating machinery and equipment may include ploughs, scarifiers, offset discs, rippers and rotary tillers. Sowing machinery and equipment may include fertiliser spinner, drop spreader, fertiliser truck, disc seeder, and chisel seeder, crop specific such as maize planter, contract aerial application, air seeder and combine.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- the safe operation and maintenance of machinery and equipment, hydraulics and guarding of exposed moving parts
- the operation of tractors and other vehicles
- manual handling especially when handling and loading seed
- working around dams, channels and other water sources
- storage, handling and transportation of hazardous substances (petroleum products, pesticides and anhydrous ammonia)
- protection from hazardous noise and organic and other dusts
- outdoor work including protection from solar radiation
- use of relevant personal protective equipment.

What weeds and pests may be controlled?

Weeds include all plants not required in the pasture. Pests may include army worms, grass grubs, grasshoppers, lucerne flea, snails, native fauna, cut worm, locusts, earth mite, crickets and rabbits.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in establishing pastures and crops for livestock production requires evidence of the ability to assess existing pastures and crops to maximise livestock production. It also requires the ability to establish new pastures and crops including selecting the pasture species, sowing method and application appropriate for optimal yield, manage grazing systems including weed and stubble control, and control pests and weeds without damage to the crop.

The skills and knowledge required to establish pastures and crops for livestock production must be transferable to another rural environment. For example, this could include different crop and pastures species, livestock, soil types and enterprise situations.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types of grasses and clovers
- chemical free weed control
- relevant provisions of the Native Vegetation Acts with particular attention to potential soil degradation and destruction of flora and fauna
- safe use of chemicals and machinery
- advantages and disadvantages of pasture and crop establishment programs
- timing of pasture and crop establishment
- OHS legislative requirements
- codes of practice with regard to protection of the environment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- operate machinery and equipment
- calibrate boom spray and drill and fertiliser spreader
- identify pests and diseases
- identify pasture species
- identify and control weeds
- handle chemicals safely
- mix and inoculate seed
- interpret and implement crop and pasture production plans
- converse and liaise with industry network, staff and senior management
- write reports for the understanding of staff and management
- calculate and measure quantities and dimensions.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3008A

Unit Descriptor

Handle bulk materials in storage area

This competency standard covers the process of receiving, moving and sampling bulk materials in a storage area. It includes the use of safety equipment and procedures, and the repair of the facility and equipment used to store the bulk materials. Bulk materials are handled to industry standards in relation to segregation and storage conditions ensuring minimum loss or damage and optimum returns. The handling of bulk materials in storage areas is likely to be carried out under limited supervision. Overall progress may be checked periodically. The handling of bulk materials in storage areas will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services. The outcomes should be achieved within specified timelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to work in bulk materials storage area	1.1 Work undertaken is interpreted from the work program where necessary, and confirmed with the management. 1.2 OHS hazards are identified, risks assessed and suitable controls implemented. 1.3 Suitable personal protective clothing and equipment is selected, used and maintained. 1.4 Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary. 1.5 Environmental implications of undertaking work in the bulk materials storage area are identified, likely outcomes assessed and if necessary responsible action taken.
2. Sample bulk materials for testing	2.1 Representative samples of bulk materials are taken for testing in line with the requirements of the bulk materials storage program. 2.2 Sampling is undertaken safely, following the prescribed guidelines for the activity. 2.3 Representative bulk materials samples are prepared for dispatch, accurately and clearly labelled, and packaged according to the guidelines of the organisation and the analysing body . 2.4 Samples are dispatched to the analysing body, according to the requirements of the bulk materials storage program.

- 3. Move bulk materials into and out of storage
 - 3.1 Bulk materials for handling and storage are correctly identified from the written or verbal instructions.
 - 3.2 Bulk materials are segregated according to type, variety and quality characteristics according to the requirements of the organisation as stated in the bulk materials storage program.
 - 3.3 Measures are taken to minimise insect and weed infestation and **contamination** during the movement of the bulk materials.
 - 3.4 Bulk materials are regularly checked for insect infestation and contamination during movement according to enterprise requirements.
 - 3.5 Any **storage and handling equipment** that is used is thoroughly cleaned after emptying, and dismantled if necessary, according to the procedures of the organisation and the nature of the equipment.
 - 3.6 Bulk materials are **moved** into and out of storage according to the procedures of the organisation, and following the prescribed OHS procedures.
 - 3.7 Silo types and handling equipment are selected for each bulk material type in relation to their storage characteristics and flow properties and according to the requirements of the bulk materials storage program.
 - 3.8 Suitable measures are implemented to minimise the affect of desiccant dusts on the flow properties of bulk materials.
 - 3.9 **Records** are clearly and accurately updated and stored as and when required by the bulk materials storage program.
- 4. Repair and maintain storage facility
 - 4.1 The need for repairs to the **facility** is identified through observation or instruction.
 - 4.2 Maintenance and **repairs** are conducted according to the requirements of the organisation and following the prescribed OHS procedures and taking into account **environmental considerations**.
 - 4.3 Completed maintenance records and other **appropriate information** are **documented** in accordance with enterprise requirements.
 - 4.4 Workshop and work areas are cleaned and maintained to OHS and enterprise requirements.
 - 4.5 Maintenance and repairs, damage, malfunctions or irregular performance in machinery, tools and equipment are reported in line with organisational requirements.
 - 4.6 Tools and equipment are cleaned, secured and stored in line with OHS and organisational requirements

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In dealing with other operators at storage site, truck drivers, silo operators, weighbridge operators and associated office personnel.	1
Collecting analysing and organising information	In regard to the storage and handling of bulk materials on properties.	1
Planning and organising activities	For bulk materials handling, loading and unloading.	1
Working with others and in teams	In completing specified activities and operations.	1
Using mathematical ideas and techniques	In calculating results of test samples and storage weights and volume.	1
Solving problems	By accessing information from supervisors and on site.	1
Using technology	In testing samples, and communicating, calculating and recording information.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What bulk materials would be stored in the bulk materials storage area?

These might be any crop harvested in the organization (e.g., cereals, legumes, pulse crops, oilseeds and pasture seeds), animal feed or fertilisers.

What OHS hazards apply to this standard?

Amongst the risks are operating and maintaining machinery and equipment, including hydraulics and exposed moving parts, noise, organic and other dusts, working with, transporting and storing hazardous substances (such as pesticides), using fumigants, working at heights, and working on the bulk materials mass.

Potential emergency situations may include:

inclement weather during operations, machinery breakdowns, storm damage to equipment and site.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below.

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts. Systems and procedures for handling and storing bulk materials, as well as working with and around electricity should also be in place.

Fixtures should be in place in all silos and storage sheds, including appropriate access ladders, handrails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled e.g., , keeping moisture levels as low as possible will reduce the likelihood of fire and silo collapse.

Procedures should be in place and used for working on top of stored bulk materials, working with bulk materials mass movement and stability, working within confined working spaces, moving vehicles, working at height.

Record keeping practices should ensure that requirements are met in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective clothing and equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sun screen).

When might bulk materials samples be taken for testing?

Bulk materials sampling occurs at receipt of bulk materials, regularly throughout the storage process, and immediately before dispatch.

What might the bulk materials storage program provide for?

The program will provide details of the bulk materials to be stored, the timeframes involved, the locations for storage, the recording and documentation requirements, the scheduling of the operation, the responsibility of the various operators to be involved, the method of pest control and the method of sampling and where samples should be sent. Details of the requirements to minimise or eliminate OHS risks, the legislative requirements in relation to all activities undertaken during bulk materials quality maintenance activities, and chemical handling procedures and guidelines would also be covered in the program.

The bulk materials storage program would also ensure that equipment and personnel arranged for operations are appropriate to the requirements of various legislation and may include equipment for detection of fumigant in atmosphere, confined spaces equipment, pressure testing equipment, fumigant/inert atmosphere pressure bottles, fumigant generation equipment, personal protection.

What equipment might be required for sampling?

Equipment such as testing apparatus, sampling, measuring and sieving equipment, operational charts, calibration and identification samples, and enterprise/ client instructions.

What might the testing and analysis cover?

The bulk materials may be tested for purity, germination, vigour, seed weight, and/or disease identification, it may also be analysed for moisture, insects (live and dead), weed and other commodity seeds, other foreign matter, cracked bulk materials, weather affected bulk materials, and bulk materials size.

Where would the analysing body be?

Testing of samples would generally take place off-site by a specialist organisation which would then prepare analysis results that would be used as a basis for decision-making within the organisation - at a higher level than this standard.

What might the contamination in the bulk materials be?

These may include moulds, moisture, mites, weeds, foreign seeds, insects, fungal diseases, soil and other foreign material.

What storage and handling equipment may be used?

Handling equipment used includes silo conveyors, elevators, chutes, and augers. Other equipment used may include tractors, front-end loaders, computing equipment used by enterprise, two-way radio/ telephone, wall charts and other visual recording methods, warning devices, and ventilation/aeration equipment.

Why might the bulk materials be subject to movement?	Bulk materials movements may be for the purposes of receipt, dispatch, aeration, treatment and/or blending of bulk materials grades.
What vehicles might be used to move the bulk materials?	Vehicles may be trucks, articulated road vehicles, trailers and appropriate unloading methods applied to each type of vehicle.
What type of records might be kept?	Records kept may include those relating to quantities and grade(s) of materials stored, bulk materials movements and cartage documentation, weigh tally sheets, equipment and operations log sheets, and stock checks.
What might the storage facility include?	The storage facility covers all types of temporary and permanent storage.
What equipment might require checking and maintenance?	Equipment which includes mechanical units integral to bulk materials handling equipment, e.g., gear boxes, bearings and oil levels.
What environmental implications may be associated with maintenance procedures?	Negative environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils containers, chemical residues), dust, and hazardous substances (e.g., fuel). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.
What other appropriate information might need to be recorded?	Tools, spares and equipment usage, and maintenance and servicing details.
How might information be documented?	Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in handling bulk materials in the storage area requires evidence that the results of contaminants and pests are minimised and that bulk materials are moved efficiently.

The skills and knowledge required to handle bulk materials in a storage area must be transferable to a different work environment. For example, across a range of pest and contaminant types that may occur in differing geographic locations or with different bulk materials.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the client's sampling and classification requirements
- bulk materials types and characteristics
- common bulk materials pests and problems
- appropriate legislative requirements, manufacturers instructions and enterprise procedures/instructions
- appropriate action in contingency situations
- silo operations and configuration, machinery and operating practices
- organisation requirements for protective equipment and safe practices in relation to OHS
- organisation and industry guidelines for segregation of bulk materials quality assurance principles
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- machinery storage and protection methods
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment
- environmental impacts associated with the operation of machinery and equipment
- personal protective clothing and equipment and when and how it should be used
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- record bulk materials stocks and movements
 - conduct silo readings
 - identify bulk materials pests and damage
 - use communication systems
 - sample and conduct a simple analysis of bulk materials
 - check equipment and storage facilities and identify current or impending faults
 - handle and manoeuvre equipment
 - test bulk materials for moisture, contamination and quality
 - complete pre-operational checks on basic tools and equipment
 - perform routine safety, service and maintenance procedures on tools, equipment and machinery
-
- operate hand and independently powered tools and cleaning equipment to industry standards
 - clean, secure and store machinery and equipment
 - perform basic trouble shooting
 - recognise and rectify minor operational faults
 - handle hazardous substances (fuels) safely
 - read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
 - interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
 - measure and calculate volumes, consumption and lubrication requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3009A**Undertake agricultural crop harvesting activities****Unit Descriptor**

This competency standard covers the process of harvesting agricultural crops. It includes preparing machinery and equipment, harvesting, cleaning and maintaining machinery and equipment and completing workplace records. Harvesting is likely to be carried out under limited supervision. Overall progress may be checked periodically and will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation, or work and services. The outcomes should be achieved within specified timelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to harvest agricultural crops	1.1 Requirements for the work to be undertaken, method and order of harvesting is interpreted from the harvest strategy and confirmed with the supervisor. 1.2 OHS hazards are identified, risks assessed and suitable controls are implemented. 1.3 Suitable personal protective equipment is selected, used and maintained. 1.4 The environmental implications of harvesting the crop are identified, likely outcomes assessed and, if necessary, responsible action is taken. 1.5 Windrowing/swathing is completed to the standard required by the harvest strategy. 1.6 Crop is sampled for moisture content against the classification standards . 1.7 The hygiene standards for the crop and the paddock are identified from the harvest strategy and/or the crop storage plan.
2. Prepare the harvesting equipment	2.1 Harvesting machinery and other equipment are cleaned of pests and other contaminants to maintain crop and paddock hygiene standards, as required by the harvest strategy. 2.2 All machinery and equipment are serviced, assessed for reliability, adjusted for harvesting conditions and appropriate parts are replaced to ensure reliability during the harvest. 2.3 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately. 2.4 All maintenance and servicing is documented according to the requirements of the organisations record keeping system.

- 3. Harvest crops
 - 3.1 The harvest strategy is followed and completed for each paddock.
 - 3.2 OHS hazards are identified, risks assessed and suitable controls are implemented.
 - 3.3 Suitable personal protective equipment is selected, used and maintained.
 - 3.4 The environmental implications of harvesting are identified, likely outcomes assessed and, if necessary, responsible action is taken.
 - 3.5 Harvesting machinery and ancillary equipment is **operated in a safe manner** and at speeds to suit crop conditions.
 - 3.6 The quality of the crop is maximised by maintaining the hygiene of all surfaces that come into contact with the crop.
 - 3.7 The quality of the crop is maximised by continually checking and, where necessary, adjusting the harvester and ancillary equipment, including their height and other settings.
 - 3.8 **Fire prevention measures** are taken as outlined and described in the harvest strategy.
- 4. Complete harvesting operations
 - 4.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations.
 - 4.2 Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturers specifications, organisational procedures and regulations.
 - 4.3 Insecticides are applied as required by the organisation and the harvest strategy.
 - 4.4 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.
 - 4.5 All required **records and documentation** are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In dealing with the full range of field staff and industry participants.	1
Collecting analysing and organising information	In collecting and interpreting information to do with equipment performance and maintenance.	1
Planning and organising activities	In preparing for, undertaking, and completing crop harvesting operations.	1
Working with others and in teams	In completing specified activities and operations.	1
Using mathematical ideas and techniques	In calculating loads, yields and crop quality.	1
Solving problems	By accessing information from supervisors and in the operation of equipment.	1
Using technology	In operating any necessary equipment prior to, and during, the harvest - communication technology, calculating equipment, measuring equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What agricultural crops does this unit cover?

Agricultural crops covered by this unit include wheat and coarse grains, cotton, grain legumes, oilseeds, sugar, temperate and tropical pastures.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below.

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts. Systems and procedures for harvesting and handling the crop, as well as working with and around electricity should also be in place.

Fixtures should be in place in all silos and storage sheds, including appropriate access ladders, handrails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled e.g., keeping moisture levels as low as possible will reduce the likelihood of fire.

Procedures should be in place and used for working on harvesters, working with grain mass movement and stability, working within confined working spaces, moving vehicles, and working at height.

Record keeping practices should ensure that requirements are met in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or facemask, and sun protection (sun hat, sun screen).

What environmental implications may be associated with cleaning and maintenance procedures?

Detrimental environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils, containers, chemical residues), and hazardous substances (fuel). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.

What classification standards are used for comparison?

These are the standards for the measurement of moisture in the crop and are produced and available from receiving authorities.

What equipment might be used alongside the harvester and windrowers during the harvest?

A range of equipment from grain augers and field and chaser bins to towing vehicles, tarpaulins, fire control equipment, conveyors, communication equipment, and crop treatment equipment.

What should be cleaned in preparation for and subsequent to, the harvest and how should it be done?

All surfaces of harvesters, and any equipment that comes into contact with the crop should be cleaned, using one of the following methods: compressed air, water wash, vacuum and water, and/or brush.

How might information be documented?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What actions should be taken to ensure that equipment is operated safely?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What fire prevention measures may need to be taken?

These will be outlined in the harvest strategy. The measures planned for and taken will address fire risks and hazards and will meet legislative requirements.

What actions will require documentation?

These will be outlined in the harvest strategy. The measures planned for and taken will address fire risks and hazards and will meet legislative requirements.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in harvesting the crop requires evidence that the crop is harvested safely and efficiently while continually maintaining the highest degree of hygiene and quality possible.

The skills and knowledge required to harvest the grain crop must be transferable to a different work environment. For example, the way in which the harvesting operations will occur will vary depending on the moisture levels of the crop, the crop type, and the equipment available.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- appropriate legislative requirements, manufacturers instructions and organisation procedures/instructions
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- pests and signs of pest infestation in the crop
- organisation moisture and hygiene requirements for the crop and equipment that comes into contact with the crop
- operational procedures and standards for harvesting and ancillary equipment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- use communication systems
- handle and manoeuvre harvesting equipment
- complete pre- and post-operational checks on tools, harvester and equipment
- perform routine safety, service and maintenance procedures on tools, harvester and equipment
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3013A**Unit Descriptor****Implement a post-harvest program**

This competency standard covers the process of implementing a post-harvest program for horticultural crops including grading, treating, packing and storing harvested produce.

Implementing a post-harvest program is likely to be carried out under limited supervision from others with checking only related to overall progress. The work requires the application of extensive horticultural knowledge and a broad range of horticultural skills. The post-harvest program usually follows established routines, methods and procedures where some discretion and judgement is required. This includes selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for implementation of post-harvest operations	1.1 Post-harvest operations to be performed are identified according to enterprise work procedures , the marketing plan and industry guidelines and confirmed with the supervisor. 1.2 Materials, tools, equipment and machinery are selected according to enterprise work procedures. 1.3 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 1.4 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.5 Suitable safety and personal protective equipment (PPE) are selected, used and maintained.
2. Co-ordinate post-harvest work	2.1 Enterprise work team is identified and tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor. 2.2 Post-harvest operations are undertaken according to OHS requirements and with due consideration of the environmental implications . 2.3 A clean, safe and hygienic work area is maintained throughout and on completion of work.

3. Implement post-harvest treatments	3.1 Harvested produce is graded and labelled according to the marketing plan and enterprise work procedures. 3.2 Produce that does not meet specifications and enterprise standards is identified and disposed of according to enterprise environmental procedures. 3.3 Post-harvest treatments are selected according to harvested produce requirements, the enterprise integrated pest management strategy and the marketing plan. 3.4 Timing, rate, application method, environmental requirements and handling techniques conform to the requirements of the harvested produce, enterprise work procedures and industry best practice. 3.5 Post-harvest practices are economical, methodical, meet established work schedules and minimise damage to produce. 3.6 Tools, equipment and machinery are cleaned and maintained according to enterprise work procedures.
4. Implement hazardous waste disposal guidelines	4.1 Waste disposal requirements of the enterprise are reviewed and operational tasks determined. 4.2 Collection of waste and disposal are monitored with variation from enterprise environmental procedures addressed promptly. 4.3 Conditions likely to impact on business viability are reported promptly to the supervisor.
5. Implement packing and presentation requirements of produce	5.1 Packing and presentation requirements specified in the marketing plan and enterprise work procedures are reviewed and operational tasks determined. 5.2 Packing and presentation of produce conform to the requirements of the harvested produce, the marketing plan and industry best practice. 5.3 Packing and presentation processes are monitored and remedial action taken where necessary. 5.4 Packing and presentation processes are recorded according to enterprise work procedures.
6. Implement storage requirements of produce	6.1 Storage requirements specified in the marketing plan and enterprise work procedures are reviewed and operational tasks determined. 6.2 Storage and handling of produce conform to the requirements of the harvested produce, the marketing plan and industry best practice. 6.3 Storage processes and facilities are monitored and remedial action taken where necessary. 6.4 Storage processes and conditions are recorded according to enterprise work procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information relating to post-harvest activities and problems encountered may be required with the work group and supervisor.	2
Collecting analysing and organising information	Enterprise work procedures and client specifications in the marketing plan should be consulted, interpreted and applied to co-ordinate the post-harvest program with further clarification sought from the supervisor when necessary.	2
Planning and organising activities	Work activities for the work group and self will be planned prior to and adjusted during the post-harvest program.	2
Working with others and in teams	The post-harvest program will involve facilitating and leading members of a team to complete the program on time and budget.	2
Using mathematical ideas and techniques	Mathematical application will be required to calculate and apply the spatial and logistical requirements of the post-harvest program.	2
Solving problems	Produce quality issues, the selection and sourcing of treatments and products, co-ordination with the work group and work activities may require negotiation and the ability to devise alternative courses of action.	2
Using technology	Technological understanding will be required to access and apply program specifications, undertake post-harvest activities, communicate, report and keep records.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available.

What post-harvest operations may apply to this standard?

Post-harvest operations may include transporting harvested produce from the field to post-harvest processing or storage facilities, grading, applying treatments, and packing, labelling and storing harvested produce.

How may the marketing plan affect the implementation of a post-harvest program?

The marketing plan will address client specifications that may include quality of plant produce (and various grades) such as variety, shape, size, weight, length, colour, maturity, moisture content, ripeness, texture, skin condition, blemishes, bud count and health which are subject to seasonal and market forces. Client preferences may also specify packaging materials, containers, filling techniques, labelling and storage requirements from field to client such as the cool chain concept.

What enterprise work procedures may apply to this standard?

Work procedures will be based on sound horticultural principles and practices and may include supervisors oral or written instructions, post-harvest program or production schedule, marketing plan, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes; industry best practice guidelines on quality, food safety and hygiene; product labels and Material Safety Data Sheets (MSDS), manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.

What materials, tools, equipment and machinery may be used to implement a post-harvest program?

Materials may include preservatives, chemicals, gases, cleaning agents, packaging materials and containers, labels, adhesives and proformas.

Tools, equipment and machinery may include tractors, trailers, light trucks, forklifts, snips, knives, gloves, containers, grading machinery, washers, brushes, dryers, chemical applicators, gassing chambers, labelling devices, packing tools, scales, pallets, hand trolleys and lifting aids, coolrooms and dedicated storage facilities.

What OHS hazards may be associated with implementing a post-harvest program?

Hazards may include a wet working environment including electricity, solar radiation, dust, pollen, soil-borne micro-organisms, noise, chemicals and hazardous substances, confined spaces, sharp hand tools and equipment, manual handling, slippery or uneven surfaces, and moving equipment, machinery and vehicles.

What safety equipment may be required?

Safety equipment may include signage and barriers, and operational safety exits from coolrooms and gassing chambers.

What PPE may be required when implementing a post-harvest program?

PPE may include hat, boots, overalls, gloves, apron, waterproof clothing, spray clothing, goggles, respirator or face mask, face guard, self-contained breathing apparatus, hearing protection, sunscreen lotion and hard hat.

What OHS requirements may be relevant to this standard?

OHS requirements may include identifying hazards, assessing and reporting risks, cleaning, maintaining and storing tools, equipment and machinery; appropriate use of PPE, safe operation of tools, equipment and machinery, ensuring operational safety exits from coolrooms and gassing chambers, confined spaces policy and procedures, safe handling, use and storage of chemicals and hazardous substances, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.

What environmental implications may be associated with the implementation of a post-harvest program?

Detrimental environmental impacts may arise where post-harvest activities produce excess noise, dust or water run-off, disposal of unwanted or waste plant material that produces odour and attracts pests, and risks infecting healthy crops, or on- and off-site ground water or soils that are contaminated from solids, debris, nutrients, chemicals and water run-off.

How may a clean, safe and hygienic work area be maintained?

Tasks may include disabling unused tools, equipment and machinery and storing neatly out of the way of post-harvest activities, safely storing materials including chemicals on-site, using signage and safety barriers during and removing after post-harvest activities are completed, cleaning, fumigating or sterilising post-harvest equipment and storage facilities, and swiftly and efficiently removing and processing debris and waste from the work area.

How will enterprise environmental procedures affect the implementation of a post-harvest program?

Enterprise environmental procedures may include procedures for the disposal of out-of-standard produce, waste material such as chemicals and hazardous substances used in post-harvest treatments, their containers, plant debris, litter, processing and cleaning water run-off, and broken components and packaging.

Waste may be removed to designated areas for recycling, reuse, return to the manufacturer or disposal.

What post-harvest treatments may apply to this standard?

Post-harvest treatments may include removal of dirt and foreign material, stripping excess leaves and/or trimming, brushing, washing/hydration, drying, applying preservatives, applying fungicides and insecticides by spraying or dipping, waxing and polishing, ripening or de-greening with ethylene gas, observing quarantine requirements and storing in a controlled environment.

What post-harvest practices may be employed to minimise damage to produce?

Field handling practices may include observing the fill level of containers, lifting rather than dragging containers to avoid contact with dirt, correctly stacking containers on transport to reduce the risk of bruising, squashing or damaging the produce, and smoothly transporting the harvested produce to the post-harvest processing or storage facility.

Harvested crops may need to be stored in the shade, in water-filled or covered containers in the field. In the shed storage may occur in a temperature-controlled environment such as a coolroom. These may include forced air coolrooms for table grapes, hydro coolrooms for stone fruit and vacuum coolrooms for mushrooms.

Produce damage may be minimised by wearing gloves, maintaining sharp tools, placing rather than dropping produce into containers, cutting fingernails, observing fill heights, arrangement of produce and packing instructions for containers, and correctly stacking containers on transport.

What packing and presentation requirements will need to be determined?

Packing and presentation requirements for specific produce and clients may include specifications for packaging materials and containers, filling techniques and arrangement of produce within the container, and for labelling.

What storage requirements will need to be determined?

Storage requirements for specific produce and clients may include specifications for storage facilities, environmental conditions such as temperature, humidity and light, length of storage, position in the storage facility and cleaning processes to ensure a level of hygiene that protects the quality and health status of the stored produce.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in implementing a post-harvest program requires evidence that a person can co-ordinate post-harvest operations, implement post-harvest treatments, hazardous waste disposal guidelines, and packing, presentation and storage requirements according to industry best practice and market specifications.

The skills and knowledge required to implement a post-harvest program must be transferable to a different work environment. For example, this could include different crops, harvesting methods and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the attributes of produce in relation to the desired quality of produce to be presented to the client
- Integrated Pest Management principles and enterprise policy
- the importance of maintaining the quality of produce including handling and cooling requirements
- the relationship between the quality attributes of produce and packing techniques and packaging
- industry standards for packaging
- cool chain principles and practices
- characteristics and procedures for the use of coolrooms
- storage methods for a range of produce
- the correct storage temperatures for a range of produce
- humidity levels and their effect on the quality of produce
- hygiene issues in the handling and storage of plant produce
- environmental effects of post-harvest treatments and hazardous waste disposal methodologies, application and purpose
- enterprise confined spaces policy and safety procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate orally and in writing with team members and supervisors
- interpret and confirm chemical labels, MSDS, work instructions and enterprise work procedures
- record information about work activities on proformas
- participate in teams and contribute to team objectives
- count and calculate quantities, treatment application rates and storage requirements
- correctly dispose of chemical substances, their containers and other waste materials to minimise environmental impact
- implement enterprise OHS policy and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3022A**Undertake agricultural crop maintenance activities****Unit Descriptor**

This competency standard covers the work involved in maintaining agricultural crops. It involves the process of assessing crop condition to identify abnormalities caused by pests, weeds, soil nutrient deficiencies and soil conditions, applying pests, disease and plant disorders and weed control measures to maximise crop production and providing crop fertiliser requirements.

Monitoring agricultural crops is likely to be carried out under limited supervision from others with checking only related to overall progress. It is usually done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. 1 Assess agricultural crop condition, growth and requirements	1.1 Crops are monitored to assess their needs and observations are recorded and reported. 1.2 Pest and disease control alternatives are identified in line with species and level of infestation present and taking into account consultant advice if obtained. 1.3 Economic threshold data is identified in line with action targets. 1.4 Sites for regular measurement of soil moisture are established in consultation with survey advice. 1.5 Soil probe is used to measure moisture levels and soil water percentage calculated. 1.6 Water requirements are calculated in line with standing crop and forecast weather conditions.
2. 2 Apply fertiliser and amendments	2.1 OHS hazards are identified, risks assessed and suitable controls are implemented. 2.2 Suitable personal protective equipment is selected, used and maintained. 2.3 Specialist sprays are selected and applied to organisation standard and taking into account consultant advice if obtained. 2.4 Specialist sprays are applied according to industry standards for growth stages. 2.5 Chipping or spot spraying is carried out as an integral part of weed control programs. 2.6 Crop growth stages and keys are assessed, recorded and reported. 2.7 Water is applied according to the identified need and the requirements of the organization. 2.8 All applications are undertaken in the full consideration of adverse environmental impacts.

3. Monitor crop condition, growth and requirements	3.1 Crop maturity is monitored and the need for further applications is determined in consultation with the manager. 3.2 The health of the crop is continually monitored and corrections to growing plan are made as and when required. 3.3 The timing of harvest is determined in consultation with contractors and property manager.
4. Complete cleaning and hygiene operations	4.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations. 4.2 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately. 4.3 All required records and documentation are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In dealing with the full range of field staff and industry participants.	2
Collecting analysing and organising information	In collecting and interpreting information to do with crop growth performance and maintenance.	2
Planning and organising activities	In preparing for, undertaking and completing application of crop improvement operations.	2
Working with others and in teams	In methods and procedures to complete seeding operations according to work plan requirements.	2
Using mathematical ideas and techniques	In calculating loads, yields and crop quality to estimate the required amounts of farm chemicals and fertiliser.	2
Solving problems	By accessing information from supervisors and in the operation of equipment.	2
Using technology	In operating any necessary equipment prior to, and during, the crop harvest - communication technology, calculating equipment, and measuring equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What agricultural crops does this unit cover?

Agricultural crops covered by this unit include wheat and coarse grains, cotton, grain legumes, oilseeds, sugar, temperate and tropical pastures.

What actions will need to be recorded, and how might they be documented?

All chemical usage should be recorded as well as any necessary recording of vehicle and equipment use in logbooks. Additionally, any assessment of pests and weeds, protein levels, quality and yield should be recorded appropriately. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What might the alternatives be when controlling pests and diseases?

Alternatives to such chemical methods may include altering management methods, considering the way that water is supplied to the crop, and using mechanical methods.

How are the fertilisers and other amendments selected?

Fertilisers and other amendments used will be dependent on nutrient levels, trace elements, acidity, alkalinity, texture and other physical characteristics of the soil, and the growth stage of the crop.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below.

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts. Systems and procedures for harvesting and handling crops, as well as working with and around electricity, should also be in place. Health and safety representatives and OHS committees in the larger agricultural organisations will contribute to the maintenance of safe conditions.

Fixtures should be in place in all silos and storage sheds, including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled e.g., keeping moisture levels as low as possible will reduce the likelihood of fire.

Procedures should be in place and used for working on harvesters, working within confined spaces, moving vehicles, and working at height. Special information, induction or training related to the activities contained within this unit.

Record keeping should ensure those requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or facemask, and sun protection (sun hat, sun screen).

What specialist sprays may be included?

The specialist sprays may include fertilisers, soil ameliorants, defoliants and insecticides.

Which sprays will be applied to the crop?

Chemicals used for invertebrate, disease and weed control will depend on the growth stage of the crop.

How will moisture status and needs of crops be monitored?

They will be monitored using an evaporation pan, rain gauge or other methods.

What environmental implications may be associated with cleaning and maintenance procedures?

Detrimental environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils, containers, chemical residues), and hazardous substances (fuel). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.

What equipment will be used?

2WD, 4WD and crawlers, appropriate mechanical loader e.g., front-end loader, hydraulic crane, block and tackle, sprayer equipment, fertiliser applicator or spreader, chipping hoe, cultivation equipment, and irrigation equipment.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in maintaining agricultural crops requires evidence that fertilisers and other chemicals are applied in a sound manner at the right time in the growth cycle for the crop in order that undesirable results and run-off do not occur.

The skills and knowledge required to maintain agricultural crops must be transferable to a different work environment for example, over the entire growth cycle of the crop.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- appropriate legislative requirements, manufacturers instructions and organisation procedures/instructions
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- organisation moisture and hygiene requirements for agricultural crops and equipment that comes into contact with the crop
- types and uses of herbicides, insecticides and other pesticides and alternative pest control methods (non-chemical).

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- detect differences and variations in crop health
- to report/communicate such differences to the supervisor/farm owner
- observe and report on health and growth of the crop
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3024A**Undertake preparation of land for agricultural crop production****Unit Descriptor**

This competency standard covers the process of preparing equipment, cultivating the site, applying any pre-planting treatments, and caring for the vehicles and equipment on completing the activity. It includes the completion of documentation and logbooks for the operation.

Preparing land for crop production is likely to be carried out under limited supervision from others with checking only related to overall progress. Preparing land for crop production is usually done within established routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work and services. The outcomes should be achieved within specified timelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for cultivation	1.1 Requirements for the work to be undertaken are interpreted from the planting plan and confirmed with the manager. 1.2 The method and order of cultivation is identified and interpreted from the planting plan. 1.3 OHS hazards are identified, risks assessed and suitable controls are implemented. 1.4 Suitable personal protective equipment is selected, used and maintained. 1.5 The environmental implications of cultivating the site are identified, likely outcomes assessed and, if necessary, responsible action is taken.
2. Prepare the cultivating equipment	2.1 The vehicles and equipment required for site cultivation are selected according to the planting plan and organisation guidelines. 2.2 The vehicles and equipment are serviced, adjusted for the conditions and worn parts are replaced to ensure reliability during cultivation. 2.3 All containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately. 2.4 All maintenance and servicing is documented according to the requirements of the organisation's record keeping system.

3. Cultivate soil	3.1 Previous crop or land clearance debris is removed, incorporated or burnt according to the organisations guidelines. 3.2 The cultivation plan is followed and completed for each paddock. 3.3 OHS hazards are identified, risks assessed and suitable controls are implemented. 3.4 Suitable personal protective equipment is selected, used and maintained. 3.5 Vehicles and equipment are operated in a safe, effective and efficient manner and at speeds to suit the conditions. 3.6 The quality of cultivation is maximised by continually checking and adjusting the vehicles and equipment as necessary. 3.7 All time, resource and quality requirements of the planting plan are met.
4. Prepare site for planting	4.1 The planting layout and soil profiles are completed as required by the planting plan. 4.2 Weed and pest control measures are taken as required by the planting plan. 4.3 Fertilisers, ameliorants, and/or other pre-planting treatments are applied as required by the planting plan. 4.4 The environmental implications of site preparation are identified, likely outcomes assessed and, if necessary, responsible action is taken.
5. Complete land preparation operations	5.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations. 5.2 Vehicles and equipment are cleaned and stored to minimise damage according to manufacturers specifications, organisational procedures and regulations. 5.3 All containers, leftover fluids, waste and debris from the cleaning and maintenance work are disposed of safely and appropriately. 5.4 All required records and documentation are completed accurately and promptly according to organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information relating to crop planting activities and problems encountered may be required with the supervisor, work group, contractors, consultants or suppliers.	2
Collecting analysing and organising information	Organisation guidelines, production and planting plans may be consulted, interpreted and applied to coordinate land preparation activities with further clarification sought from the supervisor, contractors or consultants where necessary.	1
Planning and organising activities	Work activities for the work group, contractors and self may be planned prior to, and adjusted during, the site preparation works.	1
Working with others and in teams	The site preparation works may involve facilitating and leading members of a team to complete the activities on time.	2
Using mathematical ideas and techniques	Mathematical application ideas and techniques may be required to calculate the spatial and logistical requirements of the planting site, to calibrate machinery or calculate amounts of planting material needed for the size of a field or paddock.	2
Solving problems	Seasonal variation, pests, equipment malfunction, materials non-compliance, personnel difficulties and timeline failures may require problem-solving skills.	1
Using technology	Technological understanding may be required to operate cultivating machinery, or to use communication or calculation equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What crops might the planting plan cover?

Any crop grown by the organisation for production or pasture. These may be cereals, legumes, pulses, oilseeds, pasture seeds, cotton, or sugar cane.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below:

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts, and to external elements, including solar radiation. Systems and procedures for preparing sites for planting, as well as working with and around electricity, should also be in place. Safe systems should be in place for stubble and grass burning, and for storing, handling and transporting hazardous substances.

Fixtures should be in place in all storage sheds, including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled e.g., keeping moisture levels as low as possible will reduce the likelihood of fire.

Procedures should be in place and used for working with moving vehicles and equipment.

Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sun screen).

What environmental implications may be associated with cleaning and maintenance procedures?

Detrimental environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils, containers, chemical residues), dust, and hazardous substances (fuel). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.

In what condition might the site be?

It might be the site of a previous years crop or have been used for grazing or laid fallow for a period prior to cultivation. It may also be land cleared of virgin forest, low lying land verging on mangroves, sloping high land, existing cleared land, and may have soil or surface water.

What vehicles and equipment might be used in preparing a site for planting?

Vehicles might include tractors, trucks and four-wheel drive vehicles.

Equipment might be mounted or trailing and may include ploughs, cultivators, scarifiers, fertiliser spreaders, spraying equipment, crop/stick puller, cultivators, buster, disc, lister, ripper, mulcher, tandem or offset discs, or rakes.

How might information be documented?	Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.
How might previous crop or land clearance debris be dealt with?	The planting plan might require that such debris is removed (or sprayed), incorporated (smashing, cultivating, mulching, slashing), burnt or used for grazing for a period.
What actions should be taken to ensure that equipment is operated safely?	The speeds used should be appropriate for the equipment, ground and the crop conditions, and all pre- and post-start up checks should be undertaken.
What might completing a soil profile entail?	Where laser levelling is required, assistance may be required for contractors in surveying and pegging. Also soil testing and analysis may be required.
What weed and pest control measures might be used?	<i>Weeds</i> may be controlled by using an integrated pest management program including the application of herbicides and biological control agents, grazing, slashing, burning or hay cutting. Weeds may be controlled at various times, in the preceding year, pre-sowing, post-sowing, pre-emergent, at various stages of crop and weed growth, as recommended. <i>Insect pests</i> may be controlled by using an integrated pest management program including cultural means - cultivation, etc., insecticides, biological control agents, or removal of food supply using weed control techniques.
How should treatments be used?	Use of insecticides, fertilisers and physical agents should meet legislative, manufacturers and organisation requirements.
What environmental impacts might need to be considered in preparing the site?	Detrimental effects such as erosion, loss of moisture, debilitating germination rates, and polluting water bodies.
What actions will require documentation?	All chemical usage should be recorded as well as any necessary recording of paddock size, and vehicle and equipment use. Additionally, any assessment of pests and weeds, OHS hazards, or other observations should be recorded appropriately.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in preparing land for crop production requires evidence that a site for planting is prepared safely, to the requirements of the organisation, and to the needs of the crop.

The skills and knowledge required to prepare land for crop production must be transferable to a different work environment. For example, this could include different crop types, machinery and equipment, and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- methods of cultivating a range of soil types
- environmental issues of cultivating soil for planting, such as drainage and irrigation systems, soil amelioration and waste disposal procedures
- a range of pre-planting treatments, their purpose and method of application
- OHS guidelines, procedures, and principles including manual handling.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- interpret production/planting plans, produce standards, quality specifications, work procedure documents
- measure materials and site plan specifications
- operate, adjust and calibrate cultivation equipment safely
- complete pre- and post-operational checks on tools, vehicles and equipment
- perform routine safety, service and maintenance procedures on tools, harvester and equipment
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3029A

Unit Descriptor

Establish agricultural crops

This competency standard covers the process of establishing agricultural crops. It includes preparing machinery and equipment, ploughing/cultivating, seeding, applying any pre-planting treatments, maintaining machinery and equipment, relevant record keeping, and it requires the application of skills and knowledge to use specialised equipment to carry out seeding and fertiliser operations appropriate to soil and weather conditions. In addition, it requires an awareness of licensing requirements, safe workplace and positive environmental practices associated with seeding operations including sustainable land management. The work functions in this standard involve the application of some judgement and discretion and are likely to be carried out under minimal supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare machinery and equipment for use	1.1 Machinery and equipment is selected and confirmed against the work plan and prepared to manufacturers specifications. 1.2 Equipment is securely attached and calibrated for operation to manufacturers specifications. 1.3 Existing and potential OHS hazards in the workplace are identified, risks assessed and controlled in line with enterprise requirements.
2. Prepare for agricultural crop establishment	2.1 Soil and weather conditions are monitored for optimal seeding conditions. 2.2 Soil conservation and sustainable land management practices and procedures are recognised and confirmed in accordance with enterprise requirements. 2.3 Seeding, fertiliser, and pest and weed control requirements are confirmed against the work plan and prepared to manufacturers specifications using safe handling procedures. 2.4 Contingency plans are prepared for unusual seasonal conditions.
3. Sow the crop	3.1 Suitable personal protective clothing and equipment is selected, used and maintained in accordance with OHS requirements. 3.2 Seeding and fertiliser applications are carried out in line with the work plan. 3.3 Pest and weed control treatment is co-ordinated with seeding and fertiliser applications as required. 3.4 Environmental implications associated with sowing operations are identified, assessed and controlled in line with enterprise requirements.

4. Complete seeding operations
- 4.1 Seeding, machinery and equipment operation records are maintained in accordance with enterprise requirements.
 - 4.2 Machinery and equipment damage, malfunctions or irregular performance are reported in line with enterprise requirements.
 - 4.3 Machinery and equipment is cleaned, secured and stored in line with manufacturers specifications and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information and ideas with regard to implementing seeding operations may be discussed with colleagues, supervisor and industry participants.	1
Collecting analysing and organising information	Information with regard to evaluating the efficiency and effectiveness of the seeding program may be observed and recorded for analysis and organised by reports.	1
Planning and organising activities	Activities involving maintenance and repairs to machinery and equipment may be planned and co-ordinated around seeding schedules or sequenced as required.	1
Working with others and in teams	Teamwork may be applied in methods and procedures to complete seeding operations in accordance with work plan requirements.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calibration of machinery and equipment, and the calculation and measurement of fertiliser and pesticide rates and applications.	1
Solving problems	Contingency plans may be implemented in the event of adverse weather conditions to minimise disruptions to seeding operations.	1
Using technology	To communicate, measure and record information with regard to seeding program outcomes.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What range of machinery and equipment may be applicable to this standard?	Tractors, seed drills, air seeders, plough, harrows, cultivators, scarifiers, trucks, augers and bins.
What may be included in a work plan?	Location, crop type (cereals, pulses, legumes, cotton, oilseeds, pasture seeds) and seeding method, soil condition (structure, moisture), seeding practices (sowing time, sowing rate, optimal depth of sowing, seed dressing, tilth to match seed size), fertiliser type and application, pest and weed control type and application, machinery, equipment, resources and materials requirements, supervisors instructions, timeframe for work completion and reporting requirements.
What might be involved in the preparation of machinery and equipment?	Preparation may include safe transporting, inspection, pre-start and safety checks, routine servicing and maintenance, calibration, checking and monitoring machinery settings.
What OHS requirements may be relevant to this standard?	Systems and procedures for: - the safe operation and maintenance of machinery and equipment including hydraulics and guarding of exposed moving parts. - identify hazards, assessing and reporting risks. - emergency operating procedures. - safe lifting, carrying and handling techniques. - manual handling systems and procedures, handling and storage of hazardous substances and grain, and the appropriate use of personal protective clothing and equipment. Safe systems and procedures for outdoor work including protection from solar radiation, protection of people in the workplace, protection from hazardous noise, mechanical vibration, organic and other dusts, and protection from fire risk.

What existing and potential OHS hazards may be encountered in the workplace?	Exposure to loud noise and fumes, solar radiation, dust, ergonomic hazards associated with posture and vibration, hazardous substances, the presence of bystanders, slippery or uneven terrain, potholes, stumps, ditches, gullies, embankments, obstacles (rocks, logs, fences, debris), adverse weather conditions, mechanical malfunctions and exposed moving parts, and other machinery including hydraulics.
What enterprise requirements may apply to this standard?	Standard operating procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDS), work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, and work plans.
What agricultural crops does this unit cover?	Agricultural crops covered by this unit include wheat and coarse grains, cotton, grain legumes, oilseeds, sugar, temperate and tropical pastures.
On what basis might optimal seeding conditions be determined?	This may be based on the history of seasonal weather providing a reasonable risk for dry seeding, and soil moisture conditions appropriate for grains crop germination.
What personal protective clothing and equipment may be relevant to this standard?	Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).
What environmental implications may be associated with sowing operations?	Positive environmental impacts may result from the conduct of sustainable land use practices including stubble retention, minimum tillage, and contour sowing to reduce erosion risks. It may also include the use of non-chemical alternatives for pesticides and cleaning agents, effective water re-use systems, and the reduction of noise and exhaust emissions. Negative environmental impacts may result from high activity vehicle traffic and over-cultivation practices causing erosion, increased water run-off speeds, soil compaction, soil disturbance and loss, soil degradation, dust, contamination of soil and water through the use of fertiliser and chemicals, spray drift, incorrect use and disposal of chemicals and residues, oils and containers, greases, and detergents used in cleaning and maintenance procedures.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in establishing agricultural crops requires evidence of the ability to select and utilise various features and controls of a range of specialised application equipment to seed and fertilise a grains crop. It involves the ability to prepare and service machinery and equipment, assess soil and weather conditions and determine appropriate seeding methods, prepare seeds for planting, seed to plan ensuring optimum range of depth and density, recognise and control hazards, evaluate seeding operations and maintain records. Evidence must also be demonstrated in safe workplace and environmentally responsible practices.

The skills and knowledge required to establish agricultural crops must be transferable to a different work environment. For example this may include different crops, planting techniques, machinery and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- crop types, preparation of seeds, seeding methods and application techniques
- fertiliser types, rates of application and crop nutrient requirements
- types of herbicides, insecticides and other pesticides, and alternative pest control methods (non-chemical)
- effects of weather conditions (normal and adverse) on seeding and fertilising applications
- operating principles and operating methods for machinery and equipment
- pre-operational and safety checks, servicing and maintenance procedures for seeding machinery and equipment
- principles of weight distribution with regard to load shifting and vehicle movement
- sustainable land management and soil conservation techniques
- positive environmental practices, negative environmental impacts and minimisation measures associated with seeding operations
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and the use and control of hazardous substances
- relevant State/Territory legislation and regulations with regard to licensing requirements and the use and control of machinery and equipment
- personal protective clothing and equipment and when and how it should be used
- procedures for cleaning, securing and storing machinery, equipment and materials
- enterprise policies with regard to seeding operations, and recording and reporting routines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These include the ability to:

- apply fertiliser, herbicides, insecticides, other pesticides and hazardous substances safely
- identify types of weeds and insects harmful to crops
- perform pre-operational and safety checks, servicing and maintenance on machinery and equipment
- calibrate, operate machinery and attach/detach equipment
- demonstrate emergency operating procedures in normal and adverse conditions
- recognise and report machinery damage, faults or malfunctions and perform minor repairs
- demonstrate safe, environmentally responsible and sustainable land management practices
- monitor and minimise impacts to the environment associated with sowing operations
- read and interpret manufacturers specifications, work and maintenance plans, and MSDS
- obtain relevant licences and permits
- clean, secure and store machinery and equipment
- interpret and apply task instructions, communicate with work team and supervisor, and record and report equipment faults, workplace hazards and accidents
- assess and calculate the application of fertiliser/pesticide requirements and application rates, calibrate equipment and calculate volumes, consumption and servicing requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3030A

Unit Descriptor

Harvest horticultural crops mechanically

This competency standard covers the process of harvesting horticultural crops. It includes preparing machinery and equipment, harvesting, cleaning and maintaining machinery and equipment, and completing workplace records. Harvesting is likely to be under limited supervision. Overall progress may be checked periodically and will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services. The outcomes should be achieved within specified timelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Plan to harvest horticultural crops	1.1 Requirements for the work to be undertaken, method and order of harvesting is interpreted from the harvest strategy and confirmed with manager. 1.2 OHS hazards are identified, risks assessed and suitable controls are implemented. 1.3 Suitable personal protective equipment is selected, used and maintained. 1.4 Environmental implications of harvesting the crop are identified, likely outcomes assessed and, if necessary, responsible action is taken. 1.5 Crop is monitored to determine readiness for harvesting. 1.6 Hygiene standards for the crop and the paddock are identified from the harvest strategy and/or the crop storage plan.
2. Prepare the harvesting equipment	2.1 Harvesting machinery and other equipment are cleaned of pests and other contaminants to maintain crop and paddock hygiene standards as required by the harvest strategy. 2.2 Machinery and equipment are serviced, assessed for reliability, and adjusted for harvesting after appropriate parts are replaced. 2.3 Containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately. 2.4 Maintenance and servicing is documented according to the requirements of the organisations record keeping system.

- 3. Harvest crops
 - 3.1 Harvest strategy is followed.
 - 3.2 OHS hazards are identified, risks assessed and suitable controls are implemented.
 - 3.3 Suitable personal protective equipment is selected, used and maintained.
 - 3.4 Environmental implications of harvesting are identified, likely outcomes assessed and, if necessary, responsible action is taken.
 - 3.5 Harvesting machinery and ancillary equipment is **operated in a safe manner** and at speeds to suit crop conditions, and according to manufacturer's specifications.
 - 3.6 Quality of the crop is maximised by implementing and maintaining standards that meet **hygiene/market/workplace requirements**.
 - 3.7 Quality of the crop is maximised by continually checking and, where necessary, adjusting the harvester and ancillary equipment.
 - 3.8 If appropriate, basic **sorting and grading** of the crop on the harvester is carried out according to enterprise work procedures and standards.
- 4. Complete harvesting operations
 - 4.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations.
 - 4.2 Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturers specifications, organisational procedures and regulations.
 - 4.3 Pest control measures are applied as required by the organisation and the harvest strategy.
 - 4.4 Containers, leftover fluids, waste and debris from the maintenance and servicing work are disposed of safely and appropriately.
 - 4.5 **Records and documentation** are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In dealing with the full range of field staff and industry participants.	1
Collecting analysing and organising information	In collecting and interpreting information to do with equipment performance and maintenance.	1
Planning and organising activities	In preparing for, undertaking and completing crop harvesting operations.	1
Working with others and in teams	In completing specified activities and operations.	1
Using mathematical ideas and techniques	In calculating loads, yields and crop quality.	1
Solving problems	By accessing information from supervisors and in the operation of equipment.	1
Using technology	In operating any necessary equipment prior to, and during the harvest - communication technology, calculating equipment, and measuring equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What horticultural crops are covered by this unit?

These may include crops such as potatoes, onions, leeks, carrots, beans, broccoli, cauliflowers and cabbages.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below:

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts. Systems and procedures for harvesting and handling crop, as well as working with and around electricity, should also be in place.

Fixtures should be in place in all storage sheds including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Procedures should be in place and used for working on harvesters, transporting harvested crop, keeping stability of machinery in harvesting and transporting crops, working within confined spaces, moving vehicles, and working at height.

Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sun screen).

What environmental implications may be associated with cleaning and maintenance procedures and during harvesting?

Detrimental environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils containers, chemical residues), and hazardous substances (fuel). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities.

Environmental degradation should be minimised. For example, cultural practices and movement of machinery should ensure that excessive rainfall does not cause runoff during harvesting resulting in erosion and turbidity of streams and rivers.'

What equipment might be used alongside the harvester during the harvest?

A range of equipment from field and chaser bins to towing vehicles, tarpaulins, conveyors, communication equipment, and crop treatment equipment.

What should be cleaned in preparation for and subsequent to, the harvest and how should it be done?

All surfaces of harvesters and any equipment that comes into contact with crop should be cleaned using one of the following methods: compressed air, water wash, vacuum and water, and/or brush.

How might information be documented?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What actions should be taken to ensure that equipment is operated safely?

The speeds used should be appropriate for the equipment, ground and the crop conditions. All pre- and post-start up checks should be undertaken. The machine is positioned and adjusted during use according to the crop and according to weather conditions.

What are hygiene/market/workplace requirements?

A number of practices may be implemented during harvesting to ensure the crop is not contaminated by soil (e.g. broccoli) and diseases that may contaminate sound produce and cause deterioration during harvest and storage (e.g. potatoes, tomatoes). Certain standards are required in the market place in regard to quality, shape, colour, firmness, taste, and size. Workplace/enterprise standards may exceed these conventional and accepted standards for the marketplace.

What does sorting and grading of the crop involve?

Sorting and grading may include removing out-of-type plants, or physically damaged, unhealthy, rotten or immature fruit and vegetables. The crop may be graded according to variety, size, length, colour, maturity, blemishes, bud count and quality, which are subject to seasonal and market forces. Crop in doubt is checked with the supervisor. Any out-of-standard produce should be disposed of according to enterprise policy.

What actions will require documentation?

All chemical usage should be recorded as well as any necessary recording of vehicle and equipment use in logbooks. Additionally, any assessment of pests and weeds, quality and yield should be recorded appropriately.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in harvesting the crop requires evidence that the crop is harvested safely and efficiently while continually maintaining the highest degree of hygiene and quality possible.

The skills and knowledge required to harvest the crop must be transferable to a different work environment. For example, the way in which the harvesting operations will occur will vary depending on the crop type, and the equipment available.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- appropriate legislative requirements, manufacturers instructions and organisation procedures/instructions
- pre-operational and safety checks, servicing and maintenance procedures for tools and equipment
- potential hazards associated with the operation of basic tools and equipment
- general machine maintenance procedures
- machinery operating principles and operating methods
- environmental impacts associated with the operation of machinery and equipment in a harvesting context
- organisation recording and reporting procedures
- pests and signs of pest infestation in crop
- diseases in crop
- determination of crop readiness
- operational procedures and standards for harvesting and ancillary equipment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- use communication systems
- handle and manoeuvre harvesting equipment
- complete pre- and post-operational checks on tools, harvester and equipment
- perform routine safety, service and maintenance procedures on tools, harvester and equipment
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3037A

Unit Descriptor

Save, prepare and store agricultural seed

This competency standard covers the process of selecting grain and other seed from agricultural crops for use as seed, to calculate the quantity required, to grade and test it, and subsequently to store the seed for use in the following season. Seed stocks are selected and stored to ensure maximum quality and yield when used.

The selecting, preparation and storage of seed is likely to be carried out under limited supervision from others with checking only related to overall progress. It is normally done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Select seed from agricultural crops	1.1 The quantity of seed required to sow the following season's crop is calculated. 1.2 The area of crop needed to produce the required quantity of seed for the following season's crop is calculated. 1.3 A portion of the crop to be used as seed is selected, based on the calculated requirements and its health, vigour, and grain size. 1.4 The soil type in the selected portion of the crop is noted for potential input to management decision-making. 1.5 Measures are taken to improve seed and plant health, vigour and uniformity within the selected area. 1.6 The application of any chemicals to the crop is undertaken in full consideration of detrimental environmental impacts. 1.7 All work carried out is done using the appropriate personal protective equipment and is within OHS guidelines.

2. Evaluate and grade seed
 - 2.1 After harvest, the grain variety saved is assessed for its suitability for the location, the soil, and the organisation's **current marketing requirements**.
 - 2.2 **Information regarding new varieties or trial results** and progress is sourced for input to management decision-making.
 - 2.3 The seed is graded to the required size either on or off-site.
 - 2.4 Fungicidal and insecticidal dressings are applied to the seed where appropriate and according to the organisations production and marketing requirements.
 - 2.5 **Test** samples are taken, prepared and forwarded to the **analysing body**, according to the guidelines of that body.
 - 2.6 **Records** of observations, information gathered, and results of tests and grading are kept, updated, and maintained according to the requirements of the organisation and the industry.
 - 2.7 The records kept are forwarded to the **appropriate person** for analysis and decision-making.
3. Store seed
 - 3.1 The storage facilities to be used are selected and hygienically prepared.
 - 3.2 Seed is transferred to the storage facility according to the organisations OHS and hygiene guidelines.
 - 3.3 Seed is stored under conditions that maintain its quality and germination capacity.
 - 3.4 Periodical **checks** of seed in long-term storage are conducted for quality factors and viability according to enterprise requirements.
 - 3.5 Seed samples for laboratory testing are taken as required.
 - 3.6 Test samples are taken, prepared and forwarded for analysis according to prescribed guidelines.
 - 3.7 Clear and accurate **records** of seed storage, tests and inspections are created, maintained and kept as described in the seed storage program.
 - 3.8 The **condition of storage facilities** is monitored using the schedule and methods outlined in the seed storage program.
 - 3.9 Where it is required, appropriate **corrective action** is taken to maintain seed quality.
 - 3.10 Activities around the seed storage facilities are undertaken according to the **OHS guidelines** detailed in the grain storage program.
4. Collect and deliver seed
 - 4.1 Delivery or supply terms are established and applied when collecting or delivering seed.
 - 4.2 Seed sold or purchased conforms to local State and Federal legislation and regulations.
 - 4.3 Regulations relating to the interstate movement of seeds are observed.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In making the request for seed to be tested.	1
Collecting analysing and organising information	By determining and calculating what seed should be used, from where, and in what quantities.	2
Planning and organising activities	By transferring the seed to the storage facility and ensuring the appropriate dressings are applied to the seed.	2
Working with others and in teams	During the transfer and storage of the seed.	2
Using mathematical ideas and techniques	In calculating volumes and seed amounts required.	1
Solving problems	In accessing as much information as possible about the requirements of the seed for the following years crop.	2
Using technology	In operating communication technology, calculating equipment, and measuring equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What seeds may be saved?	They may be cereals, legumes, pulses, oilseeds, or pasture seeds.
What agricultural crops does this unit cover?	Agricultural crops covered by this unit include wheat and coarse grains, cotton, grain legumes, oilseeds, sugar, temperate and tropical pastures.
What measures may be taken to improve seed?	Measures taken can include removing pests and weeds, as well as enhancing the nutrients of the area. Specifically, this may include roguing of off-types and undesirable weeds, grading out weed seeds and small grains and other impurities, enhancing the nutrient levels with pre-harvest applications, and careful harvesting to prevent cracked and damaged grain.

What might the detrimental environmental impacts of saving seed be?

Persistent application of chemicals to a particular area of soil over time can lead to a change in the soil performance, and any inappropriate disposal of containers or chemicals can contaminate soils, crops and water.

What personal protective equipment might be used during the conduct of this unit?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What are the OHS issues that impact on saving and storing seed?

They include safe systems and procedures for storage, handling and transportation of hazardous substances, chemicals selected taking into account toxicity levels and environmental effects, systems and procedures for the safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts, safe manual handling systems and procedures, safe systems and procedures for outdoor work, including protection from solar radiation, selection, use and maintenance of relevant personal protective clothing and equipment, and fire risk.

Where might the requirements of the organisations current marketing requirements and direction be sourced?

They can be found in the plan itself, and through discussion with management.

Where might information regarding new varieties or trial results be found?

This information would generally be sourced informally through discussion with operators in other organisations or through media outlets. Information may also be sourced through recommendations or directly through suppliers.

For what would the seed be tested?

It might be tested for purity, germination, vigour, seed weight, and disease identification.

Where would the analysing body be?

Testing of samples would generally take place off-site by a specialist organisation which would then prepare analysis results to be used as a basis for decision-making within the organisation - at a higher level than this standard

What records would be kept, updated and maintained for saving and storing seed?

Information from each season will be useful in building a history for the organisation, and for input into subsequent years decision-making. Record keeping is essential. Records of each step along the way should be kept: results of calculations, location of the area used for seed growing, varieties used, soil types used for growing seed, seed improvement methods used, and time of harvest.

Once harvested, records need to be kept of type, condition, and length of time in storage. Also of where it is to be sown, and the origin of the seed.

Who is the appropriate person for analysis and decision-making?

This is the person who will make decisions on the production and operations planning for sowing.

Seed history may include:

Yields of parent crop, trueness to type, age, storage treatments, and pathogens in parent crop.

Seed quality may include:

Test weights per thousand grains or similar assessment, even sized grain, and nutrient enhanced grain.

Seed storage controls include:

Moisture and humidity, temperature, pesticide concentrations, and gas tightness.

Seed selection, storage, purchase and treatment procedures should:

Maintain high germination rate, minimise disease transmission on farm and between farms, and ensure pest free status of certified seed.

Conditions that maintain a high germination percentage include:

Low moisture levels, appropriate temperatures, and freedom from pests.

Seed saved has the following known features:

Trueness to type, pest status, and insect free determine seed to be saved.

What OHS guidelines might apply to the transfer of seed to the storage facility?

They might be to alert others in the organisation, including workers and family members, of planned presence of transport, putting in place systems and procedures for

- the safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts
- the protection from hazardous noise
- the protection from organic and other dusts
- the safe systems and procedures for handling and storage of grain and seed
- the protection against electrical hazards, especially over head power lines
- storage, handling and transportation of hazardous substances (pesticides)
- the selection, use and maintenance of relevant personal protective clothing and equipment
- lifting and carrying.

Safe systems and procedures should also be in place for working in confined spaces, at height and on the grain mass.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in saving, preparing and storing seed requires evidence that enough quality seed is grown and stored in a hygienic environment to ensure a successful crop the following year.

The skills and knowledge required to save, prepare and store seed must be transferable to a different work environment. For example, across the range of grains grown, and in a range of different geographic environments.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- identification of varieties
- seed treatment and cleaning measures
- sources of purchased seed
- inoculation treatments and seed dressings used within the organisation
- records and documentation required for tracking and handling of seed
- storage techniques and requirements for seed and grain
- environmental controls and codes of practice applicable to the enterprise
- relevant legislation and regulations relating to OHS, contractor engagement, chemical use and application, vehicle and plant use, and to the use, handling and sale of seed
- sound management practices and processes to minimise noise, odours, and debris from sowing operations.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- select appropriate seed tests
- apply pre and post-harvest treatments for seed
- identify varieties from growth patterns
- identify weed seeds and contaminants
- identify pests in stored grain and initiate control measures
- calculate volumes, capacities, areas, ratios for seed, storages, and chemicals
- keep, update and maintain records relating to test results, provenance, varieties, pest control measures, and other relevant information about the seed
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3101A

Unit Descriptor

Artificially inseminate livestock

This competency standard covers the process of artificially inseminating livestock. Competency requires the application of knowledge and skills to prepare for insemination, time insemination to coincide with oestrus cycles, prepare equipment and work sites, correctly select and thaw semen for insemination, inseminate animals, and clean up and record data after insemination is complete. This work is likely to be carried out under minimal supervision within enterprise guidelines.

Unit Sector No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for insemination of animals	1.1 Timing of insemination process is scheduled to ensure availability of resource and personnel requirements. 1.2 Hygiene factors are identified and appropriate procedures followed. 1.3 Semen supplies are accessed from appropriate and reliable sources and stored appropriately. 1.4 Animals are prepared to maximise success of insemination program. 1.5 Suitable personal protective equipment and clothing is selected, used and maintained according to OHS and enterprise requirements.
2. Inseminate animals	2.1 Semen is prepared according to accepted industry and enterprise practices. 2.2 Insemination equipment is sterile and clean and applied according to industry code of practice. 2.3 Intended recipient is correctly identified and observed, and checked for signs of ovulation. 2.4 Intended recipient is restrained and prepared for insemination to optimise results according to recognised handling techniques that minimise stress. 2.5 Insemination is carried out in sterile conditions and according to appropriate hygiene procedures.
3. Document and record data	3.1 Data on insemination process is accurate and recorded according to enterprise requirements. 3.2 Historical data is reviewed to measure performance of herd in insemination program. 3.3 Conception rates are calculated and used to determine success of AI program. 3.4 Information is supplied to relevant authorities to promote research and improvements in industry practice. 3.5 Necessary modifications to herd program are identified and recorded to assist continuous improvement processes.

4. Clean work area and equipment
- 4.1 **Waste** is disposed of according to recommended hygiene standards and environmental policy.
 - 4.2 Work area is cleaned to industry standards and returned to operating order.
 - 4.3 Restraints and harnesses are cleaned and returned to safe and operational order.
 - 4.4 Animals are safely returned to designated area according to enterprise requirements and instructions.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Insemination processes and animal behaviour may be observed and accurately reported for correct action to occur.	1
Collecting analysing and organising information	Details of insemination processes and outcomes and herd management may be observed and monitored for analysis, and organised by records and reports.	1
Planning and organising activities	Insemination schedule monitoring activities may be planned and organised to ensure optimum results.	1
Working with others and in teams	Team work may be applied in methods and procedures to handle and inseminate animals.	1
Using mathematical ideas and techniques	Mathematics may be applied to calculate oestrus cycles and optimum time for insemination.	1
Solving problems	Insemination procedures may require remedial action to ensure correct semen is identified, and to avoid any complications at the time of insemination.	1
Using technology	To communicate, calculate and record animal insemination procedural data and herd management data.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What animals are covered by this unit?	Animals covered by this process include cattle, sheep, goats, pigs, horses and other commercially produced animals.
What hygiene factors need to be considered?	Sterile equipment and clean work sites including restraining areas are essential to the insemination process.
Who might be considered to be appropriate and reliable sources?	These should be legitimate and industry recognised suppliers of semen.
What are the key considerations when storing semen?	Semen needs to be stored at the correct temperature prior to use, and in a safe and secure environment.
How might animals be prepared for artificial insemination?	Observation and checking/teasing of animal to ensure animal is at correct stage of oestrus cycle. Techniques such as puberty stimulation may be used.
What personal protective equipment might be used?	Boots, overalls, gloves, and sun protection (sun hat, sunscreen).
What OHS requirements are relevant to this standard?	Safe animal handling systems and procedures including zoonoses control (Q Fever), identify hazards, assess and report risks, and safe manual handling systems and procedures. Safe systems and procedures for the application and storage of hazardous substances (drenches, vaccines), and the handling of veterinary equipment (syringes, needles, vaccines). Safe systems and procedures for outdoor work including protection from solar radiation, and the appropriate use of personal protective equipment.
What is involved in preparing semen before artificial insemination?	Straws are checked for correct sire identification and semen is thawed in readiness for insemination.
What insemination equipment might need to be sterile and clean?	Harnesses and restraints, gloves and pipettes.

How might the intended recipient be correctly identified?	Stud records, papers, and fixed identification (markings, colour, brands).
How might intended recipients be prepared for artificial insemination?	Observation and checking/teasing of animal to ensure animal is at correct stage of oestrus cycle/ovulation. If frozen semen is being used, then accurate scanning of ovulation will be required to ensure that the animal is inseminated within 15 minutes of ovulation. Washing and hygienic preparation of the vulva area, identification, completion of appropriate records, and regular follicle checks. Scanning.
How might data on insemination process be recorded?	In electronic or hard copy.
What might necessary modifications relate to?	Breed preferences, sire selection, identification of good and quality producers, and insemination processes and procedures.
What waste might there be?	Disposable equipment such as single use rubber gloves, pipettes and straws.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in artificially inseminating animals requires evidence of the ability to prepare for artificial insemination, to match straws to animal, prepare semen and inseminate animals. In addition, it requires the ability to handle animals humanely and safely, and to clean up work areas and equipment and record data.

The skills and knowledge required to artificially inseminate animals must be transferable to another rural workplace. For example this may include different animal breeds, types and insemination techniques.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- working knowledge of enterprises herd improvement or animal production plan
- basic breeding principles, including the oestrus cycle and its significance
- pregnancy testing
- animal health and abnormalities
- semen thawing techniques
- preparation requirements for artificial insemination of animals
- animal movement and behavioural characteristics
- harness and restraint equipment, components and functions
- handling techniques, restraint methods and when to use them
- enterprise and industry identification system for animals
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- legislative and regulatory controls with regard to artificial insemination
- enterprise and industry policies with regard to artificial insemination, and recording and reporting routines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- identify and record animals on heat
- observe animals on heat to detect correct insemination timing
- employ safe work practices
- clean up work site and safely dispose of waste
- communicate effectively with other teams members, veterinarians and/or licensed inseminators.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3102A**Educate, ride and care for horses and equipment****Unit Descriptor**

This competency standard covers the functions required to safely perform advanced level horsemanship activities such as regularly monitoring horse health and condition, breaking in horses in line with property policy, and advanced horse riding activities. At the completion of the work described in this standard, property horses must be handled effectively and properly.

This standard requires the application of skills and knowledge to carry out horse handling operations safely and humanely in prepared handling areas using appropriate equipment and techniques. Competency requires an awareness of animal welfare legislative requirements and organisation workplace safe practices. The work in this standard is likely to be carried out under routine supervision within organisation guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to break and ride horses	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the preparation process. 1.3 Equipment suitable for the work to be undertaken is selected, checked, and maintained if necessary. 1.4 Suitable personal protective equipment is selected, used and maintained.
2. Ride horses	2.1 Horses are caught and handled safely and within organisations guidelines and codes of practice for Animal Welfare and Handling of Horses. 2.2 Mouthing/flexing is completed in line with industry and organisation practices. 2.3 Tack is fitted and horses educated and broken to saddle in line with organisation policy. 2.4 Regular handling and education maintains horse response. 2.5 "Green" or uneducated horses ridden as a part of work routines and in line with relevant OHS legislation. 2.6 OHS hazards are continually identified, risks assessed and suitable controls implemented.
3. Monitor horse health and condition	3.1 Regular monitoring as a part of daily routines identifies signs of ill health and poor condition in organisation horses. 3.2 Horses in need of attention are mustered or caught as required, and condition reported and recorded. 3.3 Prescribed treatments are administered for common ailments under supervision of the veterinarian or organisation manager.

4. Care for saddlery and equipment	4.1 Basic working gear to suit the individual horse is selected and fitted. 4.2 Working gear is cleaned and checked as a part of regular daily routines. 4.3 Working gear is maintained or repaired as required to ensure safe horse working conditions. 4.4 Working gear and saddlery is cleaned and stored after use in line with organisation guidelines.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	When interpreting the specific work that is required, and when dealing with colleagues and clients.	1
Collecting analysing and organising information	When determining the health needs and breaking requirements of the horse.	2
Planning and organising activities	In setting up the regimes for breaking the horses.	2
Working with others and in teams	When working alongside others to achieve a common workplace outcome.	3
Using mathematical ideas and techniques	In calculating quantities and volumes of feed and additives.	2
Solving problems	When dealing with difficult or fractious horses.	2
Using technology	When measuring, communicating and calculating.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Where might organisation work procedures and guidelines be found for the work to be undertaken?

Work procedures will be based on sound agricultural principles and practices and may include supervisors oral or written instructions, organisation standard operating procedures, specifications, work notes, waste disposal, recycling and re-use guidelines, and OHS procedures.

What personal protective equipment may be relevant to this standard?	This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).
How must unbroken horses initially be handled?	Initially by approaching the unbroken horse, fitting halters, fitting neck collars, and use of industry recognised handling strategies.
How must mouthing be performed?	By lunging, long reins, restraints, and other industry/organisation practices.
What is involved in the education and breaking of horses?	It involves grooming, rugging, shoeing, riding in confined and open areas, and stockwork in confined and open areas.
What actions could be taken to eliminate or minimise the OHS risk?	Relevant OHS hazards identification, risk assessment and risk control measures: • safe operating procedures • safe manual handling systems and procedures • safe systems and procedures for outdoor work, including protection from solar radiation • selection, use and maintenance of relevant personal protective equipment. • all working routines for horses must be carried out in line with the provisions of the Workplace Health and Safety Acts and relevant animal codes of welfare.
What are some common ailments of stockhorses?	Lower limb injury, respiratory diseases, infectious skin diseases, eye injuries, tendon and ligament injuries, lacerations and abrasions, viral, fungal or bacterial infections, internal or external parasites, nutritional disorders, and colic.
What does working gear include?	It includes saddles, breastplates, martingales, bridles, cruppers, saddle bags, headstalls, saddle cloths, feeders, and rugs and restraining devices such as rearing bit, war bridle, blindfold, twitch, neck skin hold, leg strap, hobbles, and sidelines.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in performing advanced level horsemanship activities requires evidence of the ability to prepare horses for handling operations using equipment with calm and humane methods to minimise undue stress and risk to horses or handlers. It requires the ability to prepare and break in horses for riding and monitor health, together with maintenance of saddlery and horse equipment. Evidence must also be demonstrated in the advanced employment of safe workplace and positive environmental practices.

The skills and knowledge required must be transferable to another rural environment. For example, across a range of horse temperaments and stages of breaking and training.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- assessing horse confirmation and work capabilities
- basic anatomy and physiology of a horse
- anatomy of the lower limbs of horses
- environmental controls and codes of practice applicable to the organisation
- the organisations livestock production and management plans - sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- identify common horse ailments
- quickly develop an empathy with the horse or horses in their care
- handle horses for routine procedures
- effectively assess horse needs and capabilities
- observe, identify and react appropriately to environmental implications and OHS hazards
- measure quantities required for feed.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3103A**Apply quality assurance procedures in wool preparation****Unit Descriptor**

This competency standard covers the function of identifying the types of contamination in wool clips, describing the role of quality management systems, and interpreting the code of practice for the Preparation of Australian Wool Clips. It requires the ability to determine the role and application of the code of practice to the preparation of wool clips, establish the role of the classer in quality improvement for the work team, assess and control the risk of contamination in the clip, and document wool harvesting quality assurance procedures.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Determine the role and application of the code of practice to the preparation of wool clips	1.1 The aims and scope of the codes of practice are determined. 1.2 The responsibilities of those involved in wool harvesting operations are recognised. 1.3 Wool Industry Clip Preparation Standards are interpreted.
2. Establish the role of the classer in quality improvement for the work team	2.1 Wool quality issues are identified as they relate to the wool industry. 2.2 Groups and individuals who carry out functions in wool preparation are identified. 2.3 Role of the wool classer in quality improvement is defined.
3. Assess and control the risk of contamination in the clip	3.1 Possible sources of contamination are recognised. 3.2 The impact of contamination of wool on growers, buyers and processors is assessed. 3.3 Approaches to minimise contamination are determined and documented. 3.4 Contamination is removed and disposed of according to requirements of the codes of practice for the preparation of Australian wool clips. 3.5 Careful wool preparation is undertaken to minimise the risk of stained and coloured fibre in stain free lines.
4. Document wool harvesting quality assurance procedures	4.1 The level of coloured fibre risk for each mob is assessed using the risk rating from the code of practice. 4.2 The coloured fibre risk rating in the mob details section is documented on the classer's specification. 4.3 Mob status for stain free procedure and crutching period is ascertained and documented on the classer's specification. 4.4 Confirmation is provided that WHIs have been observed and the residue risk information has been documented on the classer's specification.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through communication of instructions for identification and removal of contamination and through the communication of the roles of various personnel in the maintenance of the quality assurance procedures.	1
Collecting analysing and organising information	By receiving, interpreting, and following instructions.	2
Planning and organising activities	To ensure an efficient flow of work.	2
Working with others and in teams	In working with others to ensure an efficient flow of work the maintenance of the quality assurance procedures.	2
Using mathematical ideas and techniques	Through assessment and calculation of coloured fibre, stained fibre and chemical residue risks.	2
Solving problems	In identifying impurities and contamination and ensuring separation or removal.	2
Using technology	By using and calibrating measuring devices.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What wool may be relevant to this competency standard?

Wool may include that from different breeds, different age groups, different geographical regions, and various parts of the fleece. It may also be new and/or old wool and may display seasonal variations.

Who may be involved in wool harvesting operations?

These may include the wool producer, shed hand, wool classer, shearing contractor, handling agent and classing house.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in applying quality assurance procedures in wool preparation requires evidence that quality assurance procedures have been successfully and appropriately implemented and documented in classing of wool to industry standards. The skills and knowledge required to apply quality assurance procedures in wool preparation must be transferable to a range of work environments and contexts. For example, this could include different sheds, wool types, breeds and weather conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- principles of Total Quality Management
- breeds of sheep
- processing methods - woollen and worsted, stages of processing
- raw wool characteristics and their effect on processing and final product
- wool growth, skin and fibre biology, and effect of genetics and environment on fibre characteristics
- documentation of wool clips
- code of practice for the Preparation of Australian Wool Clips and relevant Quality Standards.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- determine the role and application of the code of practice to the preparation of wool clips
- establish the role of the classer in quality improvement for the work team
- assess and control the risk of contamination in the clip
- document wool harvesting quality assurance procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3104A**Carry out basic dentition care procedures on horses****Unit Descriptor**

This competency standard covers the process of maintaining horse dentition in premium condition. It requires the application of skills and knowledge necessary to inspect teeth, to perform basic dentition care in line with enterprise policy, and to provide assistance to veterinarians where appropriate.

Work is likely to be under limited supervision from others, with checking only related to overall progress. The inspection and maintenance of teeth is performed within routines, methods and procedures with necessary skills such as the basic use of dentition tools to complete routine dentition care procedures.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to perform basic dentition care procedures on horses	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Organisation requirements for the care and handling of horses within the guidelines of animal health and welfare are recognised and understood. 1.3 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process. 1.4 Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary. 1.5 Suitable personal protective equipment is selected, used and maintained.
2. Inspect horses' teeth and undertake basic dentition care	2.1 Horses' teeth are examined for sharp edges or protrusions and filed to achieve maximum comfort for the animal. 2.2 Teeth or mouth injury requiring treatment by specialist professionals or veterinarian is notified to the stable foreman or trainer. 2.3 Professional assistance is engaged, when necessary, in line with enterprise policy.
3. Complete maintenance and administration	3.1 Equipment is cleaned in according to manufacturers specifications, organisational procedures and regulations. 3.2 Attachments and other ancillary equipment are cleaned and stored according to manufacturers specifications, organisational procedures and regulations. 3.3 All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately. 3.4 All required documentation recorded accurately and promptly according to organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In communicating with equine dental professionals.	1
Collecting analysing and organising information	In organising treatment timetables and treatment regimes.	1
Planning and organising activities	By organising personnel and contractors.	2
Working with others and in teams	By working with others to achieve overall enterprise goals.	2
Using mathematical ideas and techniques	In estimating age and treatment intervals.	1
Solving problems	When dealing with dentition or other mouth injury.	2
Using technology	When calculating and communicating.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Where might organisation work procedures be found for the work to be undertaken?

Work procedures will be based on sound horse care principles and practices and may include supervisors oral or written instructions, organisation standard operating procedures, specifications, work notes, waste disposal, recycling and re-use guidelines, and OHS procedures.

What personal protective and equipment may be relevant to this standard?

This may include boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What dentition or other mouth treatment is undertaken by a veterinarian?

This is usually all dental treatment apart from dentition maintenance.

What information might be recorded and how might it be documented?

Dates, times and periods of operation and maintenance, substances used, including quantities and methods.

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What actions could be taken to eliminate or minimise the OHS risk?

The range of actions is both systematic and conducted at an operational level. They are listed below:

- safe work systems and procedures to reduce kicks, bites and crushing injuries from horses - this will include using calm and positive actions to avoid alarming stock
- safe manual handling systems and procedures
- safe horse restraining procedures used while working on horses
- clear communication between workers, especially when working together within a close proximity
- all procedures must be carried out in compliance with the provisions of the Workplace Health and Safety Acts, their regulations and the relevant codes of practice.

EVIDENCE GUIDE

Competence in carrying out basic dentition care procedures requires evidence of the ability to inspect and evaluate state of teeth and perform required tasks in basic care and/or maintenance. It also requires the ability to assist professionals with intensive dentition treatment. Evidence must be demonstrated in complying with relevant legislative requirements.

The skills and knowledge required to carry out basic dentition care procedures must be transferable to a different work environment. For example, across a range of breeds, uses and ages of horses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- typical healthy dentition and mouth of a horse
- dental abnormalities and their effect on horse health
- the need to maximise hygiene practices and awareness.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- competently handle and restrain horses of all classes for dentition care procedures
- safely apply dental aids to horses mouths
- handle horses and perform duties around them in a firm but calm, gentle and unhurried manner
- complete horse records clearly and accurately
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function, for example:

RTE3136A Carry out basic hoof care procedures

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3105A

Unit Descriptor

Carry out feedlot operations

This competency standard covers the process of providing feed for feed-lotted animals and monitoring their health and welfare.

Carrying out feedlot operations is likely to be under limited supervision. Overall progress may be checked periodically. Carrying out feedlot operations will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work with livestock feed	1.1 Work to be undertaken is interpreted from work program, where necessary, and confined with supervisor. 1.2 OHS hazards are identified, risk assessed and suitable controls implemented. 1.3 Suitable personal protective clothing and equipment is selected, used and maintained. 1.4 Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary. 1.5 Environmental implications of undertaking work are identified, likely outcomes assessed and, if necessary, responsible action taken.
2. Mix feed	2.1 Scales and containers to be used for measurements are calibrated according to the manufacturers instructions. 2.2 Ingredients are identified from instructions and obtained from storage locations. 2.3 Ingredients are measured in the specified ratios and quantities. 2.4 Ingredients are blended adequately and hygienically in the manner specified and using the appropriate equipment. 2.5 Where grinding is required, it is done in the manner specified and using the appropriate equipment. 2.6 OHS hazards are identified, risk assessed and suitable controls implemented. 2.7 Suitable personal protective clothing and equipment is selected, used and maintained.
3. Feed livestock	3.1 Feed is stored according to organisational procedures and standards. 3.2 Feed physical quality, quantity and type are checked on their arrival to the shed. 3.3 Livestock are fed at scheduled time, rate and frequency according to organisation plans and procedures and the codes of welfare. 3.4 Throughout the feeding process, quality and hygiene of feed is maintained.

4. Establish and maintain shed hygiene
 - 4.1 Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.
 - 4.2 Cleanliness and hygiene are maintained by selecting and using appropriate **cleaning** methods according to organisation practice and relevant regulations.
 - 4.3 Thorough personal hygiene practices are maintained in all activities associated with handling livestock, including reducing risks from diseases transmissible to humans.
 - 4.4 Equipment and fittings are dismantled, cleaned and replaced correctly.
 - 4.5 All waste and debris are placed in allocated containers and disposed of, and run-off is dealt with according to the Welfare Code of Practice, organisation and public health hygiene standards.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communicating with employer and grain merchants regarding performance of nutrition of livestock.	1
Collecting analysing and organising information	Collecting, analysing and organising information in preparing to measure, weigh and mix feed.	2
Planning and organising activities	In preparing to administer medications according to the schedules provided.	1
Working with others and in teams	When working alongside other operators to ensure that required team outcomes are achieved.	1
Using mathematical ideas and techniques	Using mathematical ideas and techniques in calculating premix weights or medications.	2
Solving problems	In assessing and reporting ill health of cattle in the feedlot.	2
Using technology	In measuring and calculating amounts required when dealing with either medications or cleaning compounds.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systematic and at an operational level. These are listed below:

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts, and including pumps, impellers and aeration equipment. Precautions should also be in place to minimise exposure to noise and organics and other dusts. Systems and procedures for harvesting and handling livestock, as well as working with and around electricity should also be in place.

Fixtures should be in place in all storage sheds including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled. For example, keeping moisture levels as low as possible will reduce the likelihood of fire. Safe systems should also be in place for storage, handling and transportation of hazardous substances, including flammable and toxic gases.

Procedures should be in place for safe livestock handling, preventing zoonotic infection, tattooing and branding livestock, and safe handling of livestock.

What personal protective clothing and equipment may be relevant to this standard?

Boots, hats/hard hat, overalls, gloves, protective eyewear, hearing protections, respirator or face mask, and sun protection (sun hat, sun screen).

What tools and equipment may be used in preparing feed mixes?

Stockfeed mills and associated equipment may include truck, feedout truck, front end loader, tractor, fork lift, silage stack extractor, skid steer loader, boiler operation, stem roller mill, dry roll mill, hammer mill, computer, mill intake equipment, mill product transfer equipment, and fire control equipment. Feed mills may include roller, grinder or hammer mills.

What are the ingredients of a feed mix?

The mix might consist of prepared and formulated proprietary rations, whole grains, protein additives, and/or vitamins and minerals.

A feed mill operation is considered to be a food manufacturing facility, and should be operated under the same hygiene expectancy as human facilities. What will this require?

This will require rodent control, dust management, no rat or bird faecal contamination of feeds or raw ingredients, and feed not being wet.

When feeding, what factors must be taken into account?

Calculating rates on skip-days, applying feed evenly through sheds, and recording feeding times.

What livestock may be the subject of the unit?

Beef cattle are the most commonly feed-lotted animals, but the unit may cover shedded sheep or goats.

The categories and classes of cattle may include breed or breed cross, age, sex, condition, or lactation. Also included might be finishing steer calves, yearling steers, two-year-olds, growing steers, dry/pregnant mature cows, and cows nursing calves.

What is required to be done prior to the cleaning activities?

Identifying cleaning agents/chemicals/equipment, mixing chemicals and cleaning agents.

What should be cleaned in the and around the shed?

Equipment with which chemicals have been applied should be cleaned, complex equipment should be dismantled and re-assembled to assess areas to be cleaned, routine cleaning programs should be performed such as sweeping, dusting and vacuuming, washing amenities and facilities, including protective clothing, hand basins, toilets, showers, offices, dusting superstructure, and cleaning air filters and ducts.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in carrying out feedlot operations requires evidence that livestock remain at optimum health, and that outbreaks of disease are minimised through the effective use of hygiene procedures.

The skills and knowledge required to carry out feedlot operations must be transferable to a different work environment. For example, across a range of breeds and classes, as well as in a variety of shed types and feeding systems.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- environmental controls and codes of practice applicable to the organisation
- the organisations livestock production and management plans
- sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, and animal health and welfare
- relevant OHS legislation, regulations and codes of practice
- organisation and industry guidelines for the preparation of feed and mixes
- raw ingredients - grains, meals
- vitamins, minerals and premix formulations.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- detect possibility of disease through parameters such as behaviour, length of time required to eat food
- recognise clinical symptoms (normal vs. abnormal)
- identify a range of grain and feed types and qualities
- identify grain contaminants
- identify premixes and weigh out
- mix feeds and ingredients and identify basic mixing problems
- relate herd performance data to ration consistency
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
- measure and calculate volumes and consumption requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3106A**Unit Descriptor****Carry out mare mating procedures**

This competency standard covers the quality management of mating procedures to maximise conception rates and live foal outcomes. Competency requires the application of knowledge and skills to identify and catch ovulating mares, manage stud records, care for mares throughout the service process, and support professionals during pregnancy testing procedures.

The work is likely to be carried out with limited supervision from others, with checking only related to overall progress.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to perform mare mating procedures	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the production process. 1.3 Organisation requirements for the care and handling of horses within the guidelines of animal health and welfare are recognised and understood. 1.4 Suitable personal protective equipment is selected, used and maintained.
2. Identify mares in a state of oestrus	2.1 Mares due for service are identified and selected according to enterprise guidelines. 2.2 Selected mare is caught and restrained for oestrus identification as instructed. 2.3 OHS hazards are continually identified while handling horses, risks assessed and suitable controls implemented. 2.4 Stud records are updated accurately either manually or electronically.
3. Attend mares for service	3.1 Mare is prepared for service routines in line with stud policy . 3.2 Mare is restrained and foal secured in close proximity where appropriate. 3.3 Mare is attended through the service process as required by organisational procedures. 3.4 Mare is returned to box or paddock as instructed by the stud master. 3.5 All required records and documentation are completed accurately and promptly in accordance with organisational requirements.
4. Provide support for routine reproductive procedures.	4.1 Mare is carefully restrained, as required, for proposed procedure and in line with animal welfare guidelines. 4.2 Support is provided to stud master or veterinarian for manual or ultrasound pregnancy testing procedures.

5. 5 Maintain accurate identification and records
- 5.1 Details of identification and breeding are recorded accurately.
- 5.2 Details of any treatment performed, including follow up treatment required, are reported to supervisor.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communicating with the stud network and veterinarians as required.	2
Collecting analysing and organising information	Collecting, analysing and organising information on service and mare breeding.	2
Planning and organising activities	By arranging activities for natural and artificial matings.	2
Working with others and in teams	Working with others to complete efficient mating programs.	2
Using mathematical ideas and techniques	In calculating breeding cycles and gestation periods.	2
Solving problems	When dealing with poor conception or difficult matings.	2
Using technology	When facilitating pregnancy testing procedures.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Where might organisation work procedures be found for the work to be undertaken?

Work procedures will be based on sound agricultural principles and practices and may include supervisors oral or written instructions, organisation standard operating procedures, specifications, work notes, waste disposal, recycling and re-use guidelines, and OHS procedures.

What personal protective equipment may be relevant to this standard?

This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What methods may be used to identify mares?	Methods such as neck chains, lip tattoos, hoof brands and tattoos, and other brands.
How might mares be restrained?	Using restraints such as a mating crush, headstalls or halters, and a rearing bit.
What might oestrus identification methods include?	It may include follicle scans and the use of teasers. Follicle testing must be performed once on the first cycle, and then every second day, and might use either manual techniques or scanning equipment.
What actions could be taken to eliminate or minimise the OHS risk?	Relevant OHS hazards identification, risk assessment and risk control measures: • calm and positive actions at all times when handling horses thus minimising the risk of kicks or bites from frightened or escaping animals • manual handling codes of practice should be strictly observed • awareness of the constant workplace hazard of kicks, bites and crushing from horses • safe working practices including the need to communicate proposed actions with horses to all personnel in close proximity to avoid accidents • all procedures must be carried out in compliance with the provisions of the Workplace Health and Safety Acts, their regulations and the relevant codes of practice.
What preparation procedures will stud policy dictate?	Ovulation detection procedures, separate mating of wet and dry mares, the use of teasers, the use of hormones, caslick of mares, and the practice for dealing with returns to service. Policy might also specify procedures immediately prior to the mating itself, such as washing of the genital area, bacteriological examination by the veterinarian, application of serving hobbles/serving boots, fitting neck protectors, tail bandaging, or twitch.
What relevant information might be recorded and reported, and how might it be documented?	Dates, times and periods of observations, testing and servicing, chemicals and other substances used, including quantities and methods, and readings from temperature gauges. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.
What routine reproductive procedures may be undertaken?	Rectal palpation, ultrasound scanning, uterine infusion, pregnancy diagnosis, and other routine reproductive procedures.

When and how is pregnancy testing performed?

It is performed manually at 36-40 days, using blood tests and ultrasound at 14 days after service.

What identification and breeding records may be kept?

Details may be kept on mares on arrival, mares prior to service, stallion at service, details of foal at birth, veterinary treatment, follow up treatment required, teasing records for mares.

EVIDENCE GUIDE

Competence in carrying out mare mating procedures requires evidence of the ability to detect oestrus cycles, supervise pregnancy and attend mare, together with support for the mare during pregnancy testing.

The skills and knowledge required to carry out mare mating procedures must be transferable to another rural workplace. For example, across a range of breeds and for both natural and assisted mating procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- oestrus cycle in mares and dioestrus behaviour
- anatomy and physiology of male and female reproductive systems in horses
- conception and gestation in the mare
- basic reasons for infertility in mares and what may be treated by veterinarians
- nutritional requirements of mares prior to and post-mating
- appropriate handling restraints
- mare identification methods
- stud record keeping procedures
- mare handling procedures
- requirements of veterinarians in carrying out pregnancy testing
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice
- appropriate legislative requirements, manufacturers instructions and organisation procedures/instructions
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment
- organisation recording and reporting procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- use appropriate oestrus detection methods
- supervise serving of mares and assist as appropriate
- recognise disease, health or injury
- humanely and safely handle broodmares
- observe, identify and react appropriately to environmental implications and OHS hazards
- interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3107A

Unit Descriptor

Carry out post-shearing procedures

This competency standard covers the functions required to care for shorn livestock. It requires the application of skills and knowledge to monitor weather conditions, and implement appropriate procedures in the event of adverse weather to minimise livestock loss post-shearing. Competency requires an awareness of legislative requirements associated with shearing practices and animal welfare. The work in this standard requires the application of some judgement and discretion, and is carried out with minimal supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Monitor weather conditions	1.1 Weather is monitored during and post-shearing operations, and work programs revised in response to changing circumstances. 1.2 Adverse weather conditions are identified and the likely impacts on livestock, feed and property assessed and reported according to enterprise requirements . 1.3 Appropriate actions are determined to minimise loss or damage to livestock in/during adverse weather conditions according to enterprise requirements.
2. Assess and monitor livestock condition	2.1 Livestock condition and health status is assessed and recorded according to industry and enterprise requirements. 2.2 Abnormal behaviour or evidence of sickness is identified and reported for remedial action according to enterprise requirements. 2.3 Water and feed requirements for livestock are determined and provided, and supplementary feeding arranged as required.
3. Maintain livestock environment	3.1 Livestock yards and facilities are clean, secure and safe and maintained according to enterprise requirements. 3.2 Suitable shelter for shorn livestock is maintained to prevent losses according to animal welfare requirements. 3.3 Existing and potential hazards are recognised and controlled according to OHS and enterprise requirements.
4. Complete post-shearing operations	4.1 Environmental implications associated with shearing activities are monitored and controlled. 4.2 Shearing facilities and equipment are cleaned and waste is disposed of according to enterprise environmental requirements. 4.3 Relevant information is recorded and reported according to enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to forecast adverse weather conditions may be discussed with the manager and work team to determine appropriate course of action.	1
Collecting analysing and organising information	Post-shearing health and condition of livestock may be detailed and organised by records and reports for analysis.	2
Planning and organising activities	Repairs and maintenance to shearing facilities may be planned and co-ordinated to minimise post-shearing difficulties.	2
Working with others and in teams	Team work may be applied to effectively manage the return of livestock to normal feeding routines.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calculation of livestock feed and water requirements.	1
Solving problems	Problems of adverse weather conditions may be prepared for with a contingency plan for the movement of livestock to suitable shelter.	1
Using technology	To communicate, record and monitor prevailing weather conditions	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

How might weather information be received for monitoring?

Weather information may include personal observation, reports, warnings, data collected on property, and grazer alerts. Information may be accessed by radio, television, computer modem, electronic mail, fax, newspapers, word of mouth, and the weather bureau.

What range of adverse weather conditions may impact on shorn livestock?

This may include rain, wind, wind and rain in combination, wind chill, ultra-violet radiation, hail, snow, sleet, frost, and extreme heat and cold.

What enterprise requirements may apply to this standard?	SOP, industry standards, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use), and reporting procedures.
What range of actions may be determined for livestock?	This may include the provision of suitable shelter, shedding or moving livestock, covering or moving fodder, the provision of fire fighting equipment, and auxiliary power supplies.
What aspects of livestock condition and health status might be assessed?	This may include body weight checks, the estimation of gut fill, the presence of disease, and the general observation of soundness and wellbeing.
What may be involved in determining feed requirements?	Feeding requirements may take into account body condition, gut fill and weather conditions in terms of grazing availability.
What suitable shelter may be utilised?	Shelter includes sheds, trees and scrub, sheltered paddocks and gullies, and shade.
What potential and existing hazards may be associated with shearing activities?	Hazards may include livestock movement and handling, damaged yards, obstacles and uneven ground.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • livestock handling including zoonoses control • hazard and risk control • manual handling, including lifting and carrying • protection from hazardous noise and organic and other dusts • outdoor work including protection from solar radiation • appropriate use of personal protective equipment.
What environmental implications may be associated with shearing activities?	Negative environmental impacts may result from high density livestock activity, particularly in holding or confined areas, causing increased run-off flows, loss of ground cover, soil disturbance, pugging, odours, dust problems, weed seeds in animal manure, and contamination of ground and surface water supplies.
What relevant information might be recorded and reported?	This may include details of livestock health and condition, livestock abnormalities, livestock numbers, maintenance or repairs carried out, and any hazards or incidents.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to care for and provide appropriate nutritional and environmental requirements for shorn livestock. It also requires the ability to assess livestock health and condition, observe behaviour for abnormalities, recognise sickness or disease, arrange supplementary feeding as required, and maintain a safe and sheltered environment. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices.

The skills and knowledge required must be transferable to a different work environment. For example, if competence is evident in caring for shorn sheep in a large operation, it must also be evident in carrying out post-shearing procedures for goats in small to medium operations.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- impacts of adverse weather conditions on shorn livestock
- types and constructs of livestock shelter
- livestock handling techniques
- environmental codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- relate weather conditions to livestock requirements
- prepare contingency plan and anticipate emergency action
- handle livestock with due care
- observe and monitor livestock behaviour, health and condition
- read and interpret weather information
- communicate verbally with work team and manager, comprehend and apply task instructions
- calculate livestock numbers and calculate and measure feed requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3108A

Unit Descriptor

Class fleece wool

This competency standard covers the process of classing fleece wool from merino and crossbred sheep, using industry descriptions to meet the requirements of the national code of practice quality system as a minimum. It requires the ability to arrange layout of bins and wool table, label bins and containers to ensure optimum operational and quality management efficiency, check and prepare wool to ensure freedom from contamination and stain and optimum skirting ratios, assess pigmented wool risk, appraise wool characteristics, class wool to required standards, identify wool of higher and lower market value, and set and maintain lines. Classing wool requires knowledge of shed layouts with respect to wool flow efficiency, breeds of sheep and their characteristics, wool production areas, inherent wool characteristics, wool measurement criteria, and processing methods and principles of classing.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for wool classing	1.1 The layout of the shed, equipment and facilities are arranged according to the determined classing strategy for efficient wool flow, quality management and pressing. 1.2 All personal protective equipment and other safety requirements are selected, used and maintained according to OHS guidelines. 1.3 Bins and containers are placed correctly and clearly labelled according to the classing strategy, quality management system and enterprise requirements. 1.4 Ensure sufficient staffing ratio is established and maintained.
2. Carry out classing of fleece wool	2.1 Any bending and lifting that is required is done according to safe working practices and using the available safety equipment. 2.2 Fleece wool is handled and skirted to the standards outlined in the classing strategy. 2.3 Wool is checked to ensure freedom from contamination and stain. 2.4 Wool is checked to ensure adequate and optimum skirting. 2.5 Pigmented fibre risk is assessed and wool is kept separate as required. 2.6 Wool is appraised for its characteristics. 2.7 Wool is classed to standards of the enterprise classing strategy in accordance with codes of practice, or as required by alternative selling methods. 2.8 Wool of higher and lower market value is identified and lines made, which maximise return to the wool owner.

3. Dispose of wool and report on wet wool
 - 3.1 Wool is correctly and consistently placed in the correct bins ready for pressing, ensuring that cross contamination does not occur.
 - 3.2 Wet wool is identified according to the requirements of the classing strategy.
 - 3.3 Existence of wet wool is brought to the attention of the **appropriate authority**.
 - 3.4 Any bending and lifting that is required is done according to safe working practices and using the available safety equipment.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	With owner/manager/client/supervisor and team (team may include all others at site performing the role of wool preparation or harvesting).	2
Collecting analysing and organising information	By receiving, interpreting and following instructions.	2
Planning and organising activities	To ensure efficient optimum flow of work and product and to maximise the quality of product outcome.	2
Working with others and in teams	In working (communicating) with all others at the site to ensure an optimum for efficiency of flow of work and product.	2
Using mathematical ideas and techniques	In analysing wool, utilising historical data when planning for classing, pressing and setting line breaks, and in planning flow rates and completion times and line sizes for optimum marketing determination.	2
Solving problems	In sorting wool into lines, negotiating stock presentation to shed, co-ordinating staff and product movement and storage, and maximising available materials usage efficiency.	2
Using technology	By using and calibrating measuring devices. Understanding available testing and processing, methods and dissemination of results to maximise line and wool preparation, and testing and marketing methods and standards.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What equipment might be required for the wool classing process?	Classing tables, brooms and/or wool paddles, lamb bats, lights, calibrated devices, documentation, woolpacks/bags, bale clips, wool hooks, wool bins and wool press may be used during the process.
What personal protective equipment may be required?	Boots, overalls or protective aprons, gloves, protective eyewear, and hearing protection.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • the operation and maintenance of hazard-free facilities and equipment • safe manual handling, including lifting and carrying, and staff and product flow pathways • protection from electrical hazards, hazardous noise and organic and other dusts including spray drift, internal combustion engine fumes • appropriate use of personal protective equipment and clothing. Consideration of OHS issues for this standard may also include consideration of any national codes of practice in the industry.
What types of wool may be covered by this standard?	Wool should include Merino and Crossbred wool.
Contamination to be identified and managed when preparing wool.	Amongst the contaminants are lamb pouches, maggot affected wool, urine stains, dung stains, skin pieces, black wools, loose woolpack wools, baling twines, man-made fibres and clothing, dermatitis, branding dyes, dags and grease locks. Inherent impurities such as burrs, vegetable matter, and banded water stain, shed debris, chemical residue, dog or animal hair, i.e., goat hair, external parasite infestation.
Who might the appropriate authority be?	The flock owner could be managing the operation, or the owner might delegate this work to a manager, another classer or broker.
What wool may be included in the clip?	The clip may include fleece, pieces, bellies, locks, crutchings, shanks, topknots, stains, dags, backs, jowls or breeches.

What should the classing criteria consider?

Breed and age of sheep, fibre diameter, tensile strength, character/style, colour, yield, length, or contamination.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in classing wool requires evidence that the equipment is used appropriately and effectively to class wool according to industry codes of practice as minimum criteria.

The skills and knowledge required to class wool must be transferable to a different work environment. For example, across a national range of shed/store and wool types.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- shed layouts which promote efficient wool flow and handling
- breeds of sheep and their characteristics
- wool production areas of Australia
- inherent wool characteristics - diameter, length and strength, colour, yield, VM type, curvature, and comfort factor
- Fleece Measurement Criteria - techniques used to measure wool characteristics
- processing methods - woollen and worsted, stages of processing
- raw wool characteristics and their effect on processing and final product
- wool growth, skin and fibre biology, and effect of genetics and environment on fibre characteristics
- interpreting test results
- principles of classing (mob/flock concept, variability for fibre diameter and staple length, soundness, defects, etc.)
- classing scenarios requiring detail of clip break-ups
- clip analysis reports and comparisons
- understanding of and preparation of documentation of wool clips
- code of practice for the Preparation of Australian Wool Clips and relevant Quality Standards.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- arrange layout of bins and wool table for optimum efficient wool flow and pressing in a variety of sheds
- label bins and containers correctly
- check wool to ensure freedom from contamination and stain
- check wool to ensure optimum and adequate skirting
- assess pigmented fibre risk and separate wool as required
- identify and appraise wool characteristics
- class wool to standards in accordance to codes of practice or as required by alternative selling methods
- identify wool of higher and lower market value and lines made which maximise return to grower.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3109A

Unit Descriptor

Class goat fibre

This competency standard covers the functions required to prepare and carry out the classing of goat fibre.

It requires the application of skills and knowledge to arrange a well-planned layout for facilities and equipment for the efficient flow of clip preparation and goat fibre classing procedures. The work functions in this standard require that the application of some judgement and discretion be carried out with minimal supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for fibre classing	1.1 Clip preparation methods and classing criteria are confirmed according to enterprise requirements. 1.2 Shed layout, facilities and equipment are arranged for efficient fibre flow and pressing. 1.3 Contaminants and sources of contaminants, are identified, removed and disposed of in an environmentally responsible manner.
2. Class goat fibre	2.1 Suitable personal protective equipment is selected, used and maintained according to OHS requirements. 2.2 Clip is prepared according to enterprise requirements and checked for contamination. 2.3 Fibre is classed according to classing criteria, industry standards, and relevant national codes of practice.
3. Complete classing activities	3.1 Fibres are placed in the correct bins in readiness for pressing. 3.2 Wet wool is identified and reported according to enterprise requirements. 3.3 Work area is cleaned and waste disposed of according to OHS and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to clip preparation procedures and classing strategies may be discussed and confirmed with shed personnel or manager.	2
Collecting analysing and organising information	Information with regard to types and sources of fleece contaminants may be collection and organised for reference.	2
Planning and organising activities	Arrangement of facilities and equipment may be planned prior to clip preparation and classing process to ensure an efficient flow of work.	2
Working with others and in teams	In the application of efficient and effective procedures to complete work tasks within timeframes.	2
Using mathematical ideas and techniques	Mathematical techniques may be used in the classing and measurement of goat fibre.	2
Solving problems	Problems of wet or stained fleece or shed debris may be resolved by prompt removal and cleaning procedures to minimise contamination.	2
Using technology	Technology may be used to communicate, source information and measure goat fibre.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What may be involved in clip preparation procedures?

Clip preparation methods may be established in consultation with other shed personnel, and may involve identifying the fibre and grade, and matching the fibre lines to industry standards. It may also involve clean operating strategies to eliminate clip contamination.

What classing criteria may be used?

This may include the breed of goat, fibre diameter, tensile strength, style, length, colour and contamination.

What enterprise requirements may apply to this standard?	SOP, industry standards, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use), and reporting requirements.
What types of equipment may be arranged?	This may include classing tables, lights, woolpacks/bags, bale clips, fibre press, and clearly labelled bins and containers.
What types of goat fibre may be classed?	Fibre may include cashmere, mohair and cashgora.
What types of clip contaminants may be identified?	This may include burrs and vegetable matter, pigmented or stained fibre, shed debris and wet fibre.
What personal protective equipment may be relevant to this standard?	Boots, overalls, gloves, protective eyewear, and respirator or face mask.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • manual handling, including lifting and carrying • fibre handling and harvesting • protection from electrical hazards, organic and other dusts • outdoor work including protection from solar radiation • appropriate use of personal protective equipment.
What may be involved in classing procedures?	Classing may involve identifying and grading fibre, and matching fibre lines to industry standards. It may also include sorting fleeces, pieces, bellies, locks, prematurely shorn fleece, stained fleece and crutchings.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to implement clip preparation and fibre classing methods to maximise returns. It also requires an awareness of classing criteria, the ability to identify and dispose of contaminated and wet fleece, and accurately place fleece into appropriately labelled containers. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices. The skills and knowledge required must be transferable to different work environments. For example, if competence is evident in classing goat fibre, it must be evident that these skills may be adapted in classing sheep wool.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- fleece measurement criteria
- appraisalment types
- fleece handling procedures
- clip analysis reports and comparisons
- classing specifications
- code of practice for Preparation of Australian Cashmere, Cashgora Fleece and Mohair
- sources of fleece contamination
- OHS legislative requirements including the National code of practice for the Shearing Industry (Health, Safety and Welfare standards).

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- establish and maintain consistent methods of clip preparation
- class fleece to industry standards
- layout the shed and equipment for efficient operation
- maintain clean working conditions for clip preparation and classing procedures
- accurately assess fibre quality and types
- communicate verbally with the work team, interpret and apply task instructions
- measure goat fibre.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3110A**Co-ordinate and monitor intensive production performance****Unit Descriptor**

This competency standard covers the process of co-ordinating resources and monitoring the work of others within the production process. It requires the interpretation of schedules and plans, as well as a clear understanding of the procedures to be undertaken and the targets to be met.

When the requirements of this standard are met, employees understand the role their work plays in maintaining quality output, and a motivated workforce supports management in detecting, solving, correcting and preventing problems.

This standard is applicable to the production of both pigs and poultry in all production systems.

Co-ordinating and monitoring intensive production performance is likely to be under limited supervision from others, with checking only related to overall progress. It is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, and actions to achieve outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for work in the production area	1.1 Work to be undertaken is interpreted from work program where necessary, and confirmed with management. 1.2 OHS hazards are identified, risk assessed and suitable controls implemented. 1.3 Suitable personal protective equipment is selected, used and maintained. 1.4 Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary. 1.5 The personal protective equipment and other safety requirements are clearly communicated to staff and contractors, and confirmation of that clear communication is sought.
2. Co-ordinate work activities	2.1 Work required of staff and contractors is clear, unambiguous and follows the production plans and programs. 2.2 Work schedules, plans and priorities are met according to the needs of the organisation or situation. 2.3 The allocation of work optimises resources and the existing competencies of staff. 2.4 Feedback is provided to staff and management on request, or as necessary in accordance with established industry standards.

- 3. Monitor daily operations
 - 3.1 Manure and litter consistency is assessed and treated to prevent deterioration, where appropriate.
 - 3.2 The designated lighting and **internal environment** programs for the unit are implemented.
 - 3.3 Checks are made to ensure that effluent storage and disposal systems are operated according to the production program and manufacturers instructions.
 - 3.4 Checks are made to ensure that all rubbish and used consumables are removed from production site according to the requirements of the production program.
 - 3.5 Herd/flock and shed **conditions** are regularly observed for signs of ill health, and changes recorded and reported.
 - 3.6 Checks are made to ensure that the OHS requirements are being observed and followed.
 - 3.7 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.
- 4. Monitor flock health
 - 4.1 Herd/flock and shed conditions are regularly observed for signs of ill health and changes recorded and reported.
 - 4.2 Livestock is examined for evidence of **disease** through correct **post-mortem** techniques in line with individual unit standard and veterinary advice.
 - 4.3 **Disease status** of unit stock is assessed and evaluated, and serviceman or veterinary assistance notified when required.
 - 4.4 Components of **quarantine procedures** are regularly checked for compliance.
- 5. Complete records and documentation
 - 5.1 **Information** gathered throughout production operations is gathered and collated.
 - 5.2 Collated information is graphed where required, and prepared for presentation to supervisor or manager ready for easy recognition and extraction of **data**.
 - 5.3 Information **gathering, collation** and presentation is undertaken promptly, efficiently and accurately.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By preparing documentation to be read and interpreted by a range of people with differing needs.	2
Collecting analysing and organising information	Collecting, analysing and organising information to analyse problems and investigate from 1st principles.	3
Planning and organising activities	Planning and organising activities by allocating and ensuring all work is completed.	2
Working with others and in teams	Working with teams and others by co-ordinating and organising groups of people to perform operational tasks.	3
Using mathematical ideas and techniques	In collecting and presenting production data, and to confirm compliance with or deviation from standards.	2
Solving problems	In investigating and assessing disease presentation in livestock.	2
Using technology	In operating a range of equipment during the production operations - communication technology, calculating equipment, measuring and recording equipment, and spreadsheeting software.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below:

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise, gases and organic dusts.

Fixtures should be in place in all storage sheds including appropriate access ladders, hand rails and ladder cages

Personal protective equipment should be selected, used and maintained.

Environmental conditions should be controlled. For example, keeping moisture levels as low as possible will reduce the likelihood of fire.

Procedures should be in place and used. Persons should not be allocated tasks that they are not competent to perform.

Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sun screen).

In what situations might feedback be given?

Regular staff discussion in groups, reviews of performance with each staff member, management encouraging comment on their own performance, clearly defining responsibilities for each position, notices, providing information on unit performance - good and bad.

What might aspects of the internal environment include and how may they be adjusted?

Aspects such as humidity, light, temperature variations, and exhaust efficiency. They may be adjusted through the use of blinds, gas heaters, sprinkler systems and shutters.

What conditions are to be considered for livestock?

Livestock density and space, feed and drinker space, air capacity, line speed, feed distribution times, and environmental conditions.

What common disease conditions may be readily identified?	In pigs, they are scours, mange and live, pneumonia, erysipelas and gastric disorders. In chickens and hens they may be coccidiosis, infectious bronchitis, Mareks disease, or chronic respiratory disease.
When would post mortems be carried out?	They will be carried out as a part of daily unit routines, with samples and specialist assistance being called when non-routine symptoms are observed.
What might need to be examined when determining flock health/disease status?	Examining disease status of flock may include examining records of all medications, assessment of medication efficacy, records of serological monitoring, records of other microbiological surveillance such as salmonella, daily record sheets, company performance to expected breed standards for mortality, body weight, feed times, feed rates, and recognising abnormal lesions on post-mortem and relaying these for diagnosis in conjunction with manager and veterinary staff.
What are the components of the quarantine procedures?	They include perimeter fencing, rodent and wildlife control, visitor policy/showering/clothing, and the control of interactions with feed trucks/market.
What may collected information relate to?	Information gathered and collated may relate to herd/flock performance, stock transfers, and/or unit targets.
How might information be documented?	Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.
What performance data will be collated?	Performance data concerning livestock may include weights, feed and water information, mating records, litter performance, disease incidence, sales, deaths and losses, and audit. Whilst performance data concerning operators may include attendance records, work schedules, team activities, staff classification by job description, and preparation of clear work schedules.
Why must information be gathered, collated and presented with efficiency?	Rapid detection of poor performance and the reasons are critical to minimise economic loss in a poultry production unit. Analysis and hopefully rapid corrective action follow detection.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in co-ordinating and monitoring intensive production performance requires evidence that work schedules are accurately interpreted and resources are allocated efficiently to achieve the required outcomes.

The skills and knowledge required to coordinate and monitor intensive production performance must be transferable to a different work environment. For example, across a range of different shed types and production systems, as well as a range of livestock breeds and classes.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- common livestock diseases and clinical signs
- relevant industry, environmental and quality standards (inc ISO9002:1094)
- animal welfare codes of practice and procedures
- biosecurity codes of practice
- types of sheds equipment
- costs, depreciation, measuring livestock performance economically
- using statistics to verify problems
- workplace agreements or award conditions for staff

- staff training plans and programs
- recording and reporting requirements
- fundamentals of quarantine and control methods
- feed ingredients, additives, and differences.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and MSDS
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- prepare, update and amend spread-sheeted information using a software package
- discuss production performance, risk and hazard potential, quality of output, and methods of production with both management and operators
- plan and implement the activities contained in livestock production plans
- observe, identify and react appropriately to environmental implications and OHS hazards
- recognise when performance standards are exceeded, and investigate and report findings in written form
- provide leadership for staff including feedback on performance.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3111A

Unit Descriptor

Appraise wool using industry descriptions

This competency standard covers the process of appraising wool by applying the industry description system (AWEX-ID) to classed lines of wool. It requires the ability to apply industry standards to clip preparation and to classify lines according to the description system. The work functions associated with this standard relate to wool classers working under direction but unsupervised.

This standard does not meet the requirements of accredited industry appraisers.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Source and prepare information on wool to be appraised	1.1 Sources of information on wool appraisal are identified and accessed. 1.2 The industry description system is described. 1.3 The visual characteristics to be appraised are identified and classified using the relevant descriptors.
2. Apply the industry description to lines in a clip	2.1 Wool clip classing lines are checked for compliance with the code of practice for the AWEX Quality System, Preparation of Australian Wool Clips. 2.2 Wool clip classing lines are appraised and the AWEX-ID is recorded. 2.3 The consistency of appraisal across a wool clip is evaluated against appraisals for the clip in the sale catalogue.
3. Use the industry description to establish a market value for lines made	3.1 Market information is accessed. 3.2 Premiums and discounts for wool characteristics are identified. 3.3 A value is determined for each line made.
4. Review clip preparation strategies using an industry description	4.1 Clip preparation strategies are checked and revised using the AWEX-ID descriptors, and the market value applied to the lines made. 4.2 Feedback on market information, the effect of management on the wool clip and possible future selection strategies is provided to the woolgrower using the AWEX-ID descriptors applied to the lines.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	With owner/manager and shearing team.	2
Collecting analysing and organising information	By receiving, interpreting, and following instructions.	2
Planning and organising activities	To ensure an efficient flow of work.	2
Working with others and in teams	In working with others to ensure an efficient flow of work.	2
Using mathematical ideas and techniques	In appraising wool characteristics, applying the industry description and establishing market value.	2
Solving problems	In identifying impurities.	2
Using technology	By using and calibrating measuring devices.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What sources of information may be relevant to this competency standard?

These may include wool sampling documentation including weight note, test requests and floor sheets, wool broker's sale catalogues, wool growers, wool testing houses, classer's specifications and Wooltrak market reports - premiums and discounts.

What visual characteristics may be relevant to this competency standard?

Visual characteristics may include breed, style, wool category, colour, type of vegetable matter fault, degree of stain, faults and defects, estimated staple strength on non-staple measured wool, and estimated staple length on non-staple measured combing length wool.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in appraising wool using the industry description system requires evidence that wool has been accurately appraised according to industry standards. The skills and knowledge required to appraise wool must be transferable to a range of work environments and contexts. For example, this could include different sheep breeds, types of wool, and workplace environments.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- code of practice for the AWEX Quality System, Preparation of Australian Wool Clips
- AWEX-ID Appraisal Guidelines
- Australian Wool Exchange Wool Selling Rules
- relevant sources of wool sale lot information
- subjective assessment of style, colour, type of vegetable matter fault, degree of stain and faults, and defects.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- source and prepare information on wool to be appraised for industry description (AWEX-ID)
- apply an industry description (AWEX-ID) to lines in a clip
- use an industry description (AWEX-ID) to establish a market value for lines made
- review clip preparation strategies using an industry description.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3112A

Unit Descriptor

Handle and care for stallions

This competency standard covers the process of handling and caring for stallions, particularly through the mating process. It includes collecting semen and caring for the horse to ensure minimal distress after mating. Through the effective implementation of this standard, conception rates (and live foal outcomes) are maximised through efficient and well-managed stud activities. Stallion use and care ensures the success of the stud as a business.

This standard requires the application of skills and knowledge to handle and mate horses. Competency requires an awareness of animal welfare legislative requirements and organisation workplace safe practices. The work in this standard is likely to be carried out under routine supervision within organisation guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to handle stallions	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the mating process. 1.3 Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary. 1.4 Suitable personal protective equipment is selected, used and maintained.
2. Care for stallions	2.1 Stallions are caught, groomed, checked and exercised as a part of daily routines to maintain fitness and monitor injury, condition and general health. 2.2 Regular checking and accurate observation ensures that all changes in stallion behaviour and health are identified and recorded. 2.3 Feed and water requirements are applied in strict compliance with prescribed nutritional programs and details recorded. 2.4 OHS hazards are continually identified while handling horses, risks assessed and suitable controls implemented. 2.5 Horse health routines are maintained through and between breeding seasons as prescribed by the supervising veterinarian and/or stud manager.

3. Handle stallion for mating procedures
 - 3.1 Selected stallion is caught and **identified** in line with mating requirements.
 - 3.2 Suitable **restraint** is applied to stallion for **mating** activities.
 - 3.3 All handling of the stallion is done within the guidelines of animal welfare codes and practices.
 - 3.4 **Organisation hygiene practices** are applied to ensure that risks of disease are minimal.
 - 3.5 **Mating or semen collection** is completed according to organisation standards, and to minimise stress to the stallion.
 - 3.6 **Post-mating procedures** are completed as instructed by stud master or veterinarian.
4. Complete hygiene and administration activities
 - 4.1 Equipment is cleaned and stored according to manufacturers specifications, organisational procedures and regulations.
 - 4.2 All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.
 - 4.3 All required **records** and documentation are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In communicating with the stud network and veterinarians as required.	2
Collecting analysing and organising information	By collecting, analysing and organising information on stallion performance and mare broodiness.	2
Planning and organising activities	Through servicing procedures.	3
Working with others and in teams	Working with others to facilitate smooth mating operations.	3
Using mathematical ideas and techniques	In calculating volume and breeding cycles.	2
Solving problems	When dealing with poor conception or difficult matings.	3
Using technology	When communicating and completing laboratory measures.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Where might organisation work procedures be found for the work to be undertaken?	Work procedures will be based on sound agricultural principles and practices, and may include supervisors oral or written instructions, organisation standard operating procedures, specifications, work notes, waste disposal, recycling and re-use guidelines, and OHS procedures.
What tools and equipment might be required?	It includes saddles, breastplates, martingales, bridles, cruppers, saddle bags, headstalls, saddle cloths, feeders and rugs, and restraining devices such as rearing bit, war bridle, blindfold, twitch, neck skin hold, leg strap, hobbles and sidelines. Brushes and combs, clippers, bot knife, scrapers and soap will be used.
What personal protective equipment may be relevant to this standard?	This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).
How might stallions be exercised?	They will be exercised by lunging and/or riding.
What actions could be taken to eliminate or minimise the OHS risk?	Relevant OHS hazards identification, risk assessment and risk control measures: • calm and positive actions at all times when handling horses, thus minimising the risk of kicks or bites from frightened or escaping animals • manual handling codes of practice should be strictly observed • awareness of the constant workplace hazard of kicks, bites and crushing from horses • safe working practices, including the need to communicate proposed actions with horses to all personnel in close proximity to avoid accidents • all procedures must be carried out in compliance with the provisions of the Workplace Health and Safety Acts, their regulations and the relevant codes of practice.
What horse health routines will be maintained?	Annual vaccination for bacterial disease, internal and external parasite prophylaxis, and hoof and limb injury treatment and maintenance.
How might stallions be identified?	Through freeze brands (on neck or shoulder), hot iron brands, lip tattoo, or hoof tattoos.

What restraints might be used?	Devices such as rearing bit, war bridle, blindfold, twitch, neck skin hold, leg strap, hobbles and sidelines.
How might hand mating be conducted?	It will occur in a stabled environment and involve tethering and serving hobbles on mares, twitches, sidelines, and fitting of serving boots and neck protection on mares.
What would organisation hygiene practice include?	It would include washing and grooming, preparation and washing of prepuce, vulva and other reproductive organs of stallion and mare, and disinfection of premises.
What will organisation mating or semen collection standards dictate?	They will cover specifications for limiting mating numbers for individual stallions, mating intervals, the use of specialist equipment, and seasonal routines.
What do post-mating procedures include?	They include washing, grooming, feeding, and rugging.
What information might be recorded and reported and what form might this take?	Dates, times and periods of work conducted, chemicals and other substances used including quantities and methods, and readings from temperature gauges. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in handling and caring for stallions requires evidence that stallions are kept in a healthy condition, and mating is conducted hygienically and according to animal codes of practice.

The skills and knowledge required to handle and care for stallions must be transferable to a different work environment. For example, across a range of those breeds and for both natural and hand mating procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the need for accurate identification and recording in the mating process
- common equine injury and disease that affects breeding horses
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice
- appropriate legislative requirements, manufacturers instructions and organisation procedures/instructions
- organisation recording and reporting procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- recognise disease, ill health or injury
- humanely and safely handle stallions and mares
- provide support to veterinarian for a range of procedures
- observe, identify and react appropriately to environmental implications and OHS hazards
- communicate with work team and supervisor, and record and report workplace hazards and accidents.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3113A

Unit Descriptor

Identify and draft livestock

This competency standard covers the functions involved in identifying and drafting or sorting of animals for sale, breeding or for other enterprise requirements.

Identifying and drafting/sorting animals is likely to be under limited supervision from others with checking only related to overall progress. Selecting animals is carried out within established routines, methods and procedures where some discretion and judgement by others is required.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Identify animals	1.1 Criteria for animal selection are identified and clarified from production and marketing information and supervisor or management instructions. 1.2 Suitable personal protective equipment (PPE) is selected, used and maintained in accordance with OHS requirements. 1.3 Procedures to control and sort livestock are conducted with due care in accordance with OHS and animal welfare requirements. 1.4 Animals are identified and separated according to unit selection criteria. 1.5 Identification devices are safely and humanely applied and used on animals according to industry practice and the code of welfare. 1.6 Existing and potential hazards in the workplace are recognised and risk is assessed and controlled in line with OHS and environmental management requirements.
2. Assess and select animals	2.1 Animals are accurately assessed according to industry and/or enterprise criteria and guidelines. 2.2 Procedures to control and sort livestock are conducted with due care in accordance with OHS and animal welfare requirements. 2.3 Animals are correctly ranked and selected using performance records and organisational criteria. 2.4 Selection is reliably and accurately recorded and reported to unit management. 2.5 Suitable personal protective equipment is selected, used and maintained in accordance with OHS requirements. 2.6 All accepted guidelines and industry norms for prescribed medication withholding periods are observed when selecting animals. 2.7 Records and documentation required by the enterprise is completed clearly, accurately and promptly. 2.8 Existing and potential hazards in the workplace are recognised and risk is assessed and controlled in line with OHS requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	To determine numbers of animals for selection for breeding or marketing and customer requirements.	2
Collecting analysing and organising information	While recording weights, back fat and conformation scores.	2
Planning and organising activities	Preparing handling areas and equipment and ensuring access routes are clear and free of obstacles may be planned and organised prior to livestock movement.	2
Working with others and in teams	Teamwork may be applied in methods and procedures to move and conduct livestock and to complete placement of identification tags or marks.	2
Using mathematical ideas and techniques	To develop selection grids for breeding stock.	2
Solving problems	When selecting and sorting animals in relation to marketing/breeding requirements.	2
Using technology	To communicate, record livestock numbers and data, and weigh livestock.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What animals does this unit cover?

Animals covered by this unit include beef and dairy cattle, sheep, goats and pigs.

What personal protective equipment may be relevant to this standard?

This may include boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What procedures may be implemented to control and sort livestock?

Procedures may include the appropriate use of handling equipment with minimum force, a reasonable amount of time for livestock to complete movement, and the use of positive and calming techniques. For some animals, dogs may also be used to assist in the controlling and directing of livestock.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- handling livestock including zoonoses control
- operating handling equipment
- hazard and risk control
- manual handling
- handling, application and storage of hazardous substances
- outdoor work including protection from solar radiation, dust and noise
- the appropriate use and maintenance of personal protective equipment

- tattooing and branding livestock
- using slap brands or tattoos, and back fat testing.

What livestock identification devices might be used?

Livestock identification devices may include tattoos, brands, ear tags (electronic, bar-coded and visually readable), rumen boluses or other devices that may be part of an industry-based identification scheme.

What tools and equipment might be used in the conduct of this unit?

Equipment such as identification devices and associated application equipment, tools for testing back fat, and tools for tattooing may all be used at various stages of this activity.

What existing and potential hazards may be encountered in the workplace?

Livestock movement and handling, solar radiation, organic and other dusts, excessive noise, moving machinery and vehicles.

What environmental implications may be associated with livestock production?

Negative environmental impacts may result from high density livestock activity, particularly in holding or confined areas, causing odour, increased run-off flows, loss of ground cover, soil disturbance, pugging, dust problems, weed seeds in animal manure, and contamination of ground and surface water supplies.

What industry and/or enterprise criteria and guidelines may be relevant when grading/selecting livestock?

Breeding stock may be graded/selected according to desirable and undesirable conformation, temperament and performance, back fat depth at the P2 site, growth rate, breeding lines, overall conformation and physical soundness or other criteria.

Livestock for market may be graded/selected according to recognised industry grading criteria such as breed, sex, condition, tattoo, and body tattoo, ear tag/notch, electronic implants, and age-weight (growth period/stage).

What relevant information might be recorded and reported? Livestock numbers, details of administered preventative health treatments and outcomes, appraisal results, back fat test results, conformation, temperament and performance details, weight and condition scoring and any observed abnormalities.

How might information be documented? Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

Competence in identifying and selecting animals for breeding or sale requires evidence of the ability to identify criteria for animal selection, control and sort livestock, safely and humanely apply identification devices, and appraise and grade animals.

The skills and knowledge required to identify and draft animals for sale must be transferable to a different work environment. For example this may include different types of animals and different enterprise production outcomes.

What specific knowledge is needed to achieve the performance criteria? Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- handling techniques and restraint methods
- environmental codes of practice with regard to livestock production
- enterprise and industry grading/selection animal identification procedures
- selection criteria for breeding stock

What specific skills are needed to achieve the performance criteria? To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- recognise animals unfit for transport
- provide due care in the handling of livestock
- recognise livestock abnormalities
- read and comprehend oral and written information and instructions, write basic statements and maintain livestock handling records
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits
- prepare and present production and other information in a manner that is readily accessible for both management and operators.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3114A

Unit Descriptor

Implement feeding plans for livestock

This competency standard covers the process of assessing the health and condition of livestock, and the available pasture for grazing. It requires the ability to interpret written feeding plans, to acquire and provide supplementary feed as determined, and to graze pasture prudently. It requires the knowledge of indicators of animal health at all ages within the herd/flock.

Discretion and judgement is required in the selection of the feeding system and in the assessment of supplementary feed requirements. Co-ordinating the feeding of livestock may involve some responsibility for others.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Determine livestock condition and nutritional requirements	1.1 Livestock condition is assessed and recorded according to industry standards and enterprise requirements . 1.2 Livestock production status is identified according to enterprise requirements. 1.3 Livestock nutritional requirements and the nutritional value of pasture and feedstuffs are identified. 1.4 Feeding plan is confirmed and adjusted, as required, appropriate to livestock condition and essential nutritional requirements. 1.5 Animals that do not fit within the established ideal range are identified, and a written record is made.
2. Assess pasture feed	2.1 Quantity and quality of available pasture is assessed according to feeding plan requirements. 2.2 Grazing management is identified and maintained to ensure the sustainable stocking capacity of pasture. 2.3 Grazing behaviour of livestock is monitored to ensure effective feeding. 2.4 Livestock feeding methods are determined, and feed problems are identified and controlled according to enterprise requirements.
3. Arrange supplementary feeding	3.1 To reach the production targets and to meet the established ideal growth and condition range, the feeding requirements of livestock are determined. 3.2 Supplementary feeding is introduced to maintain livestock body weights, condition or lactation requirements. 3.3 Supplementary feeding system is selected on the basis of a cost benefit analysis. 3.4 Mixed feed is analysed to ensure the nutritional needs of livestock are met. 3.5 Suitable feed conservation methods are identified to meet normal and abnormal conditions.

4. Manage the feeding of livestock
 - 4.1 Livestock are grazed on pasture according to the guidelines described in the feeding plan.
 - 4.2 Required supplementary feed is obtained according to the guidelines described in the feeding plan.
 - 4.3 Supplementary feed is provided to livestock in the manner, and at the times described in the feeding plan.
 - 4.4 Supplementary feeding system is selected on the basis of a **cost benefit analysis**.
 - 4.5 Indications of any negative environmental impacts are identified and assessed, and amendments are made to the feeding plan as required.
 - 4.6 The **feeding system** selected is regularly assessed against the range of required **parameters**, and adjustments are made as and when they are required.
5. Monitor feeding plan
 - 5.1 Livestock feeding plan is monitored for efficiency and effectiveness, and is adjusted as required to meet nutritional requirements.
 - 5.2 Costs are monitored and controlled within enterprise budget requirements.
 - 5.3 Workplace safety and positive environmental practices associated with livestock production are monitored and controlled according to **OHS** and enterprise requirements.
 - 5.4 Data is documented for continual assessment and planning management.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By preparing written plans that may be implemented by other people.	2
Collecting analysing and organising information	In assessing the health and condition of both the herd/flock and pasture.	2
Planning and organising activities	In planning for and implementing feeding plans for livestock.	2
Working with others and in teams	In working with others to ensure that animal health assessments are correct.	2
Using mathematical ideas and techniques	In estimating and calculating the required supplementary feed requirements and quantities.	2
Solving problems	In recognising where corrective action is required and then implementing the appropriate action.	2
Using technology	In calculating and scheduling supplementary feed requirements.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What livestock are covered by this unit?	Livestock may include beef and dairy cattle, sheep and goats.
How might livestock condition be assessed?	Livestock condition may be assessed by weighing, condition scoring, body condition, lactation stage, milk yield, and Livestock Market Reporting System (LMRS).
What enterprise requirements may be applicable?	SOP, industry standards, production schedules, MSDS, work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and managers oral or written instructions.
What information may be included in a feeding plan?	Feeding plans may include information with regard to seasonal supplementary feeding pattern, fodder conservation plan, feed purchases, drought reserves, minimum livestock condition levels, production requirements, and use of agistment.
What feeding methods may be implemented?	Feeding methods may include staged introduction of grain feeding, feeding grain on the ground or in troughs, access to water, allowing adequate time to change over feedstuffs, ad lib feeding, restriction of movement, gradual introduction to feedstuffs, and strip grazing.
What feed problems may be identified?	Feed problems may include introduction of weeds, chemical residues, trampling losses, grain poisoning, curtailed or shortened lactation, mis-mothering, and scouring.
Which criteria can be used to assess production targets?	Measurable criteria may include growth rates, sale weights, milk production, the growth/weight of calves, lambs and/or kids, and the pregnancy status of dairy cows and heifers.
What may be involved in supplementary feeding?	This may involve identifying livestock condition and matching appropriate supplementary feedstuffs, identifying feed nutrient values, identifying purchased feed problems such as weed seed, and determining rates and frequency of feeding.
What feed conservation methods may be identified?	Feed conservation may include cutting hay or silage, feeding crops, irrigation, harvesting grain, standing pasture, and pasture/hay setting.

What conditions may be identified as abnormal?	Abnormal conditions may include destruction of fodder caused by fire, flood, drought, frost, insects, cyclones, hail and snow.
Are financial indicators the only component of a cost benefit analysis?	Costs and benefits are considered in terms of all impacts on the performance of the business, and must include animal welfare, environmental, and OHS issues, as well as the financial ones.
What components are there in a feeding system?	The system will include the locations and times for grazing, and the types and quantities of supplementary feeding.
What parameters can be used to measure the effectiveness of the feeding plan?	These parameters are the health and condition of the animals, the health and condition of the pasture, the financial cost to the business, and the productivity of the business.
What OHS requirements may be relevant to this standard?	Safe systems and procedures for: • livestock handling including zoonoses control • manual handling including lifting and carrying • machinery and vehicle safety when feeding out • feed materials handling systems and procedures to reduce risk associated with organic dusts • use of relevant personal protective equipment.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in planning the feeding of livestock requires evidence that the available pasture is effectively grazed, and that the herd/flock remains within the optimum range of health established within the business.

The skills and knowledge required to plan the feeding of livestock must be transferable to a different work environment. For example, this may include different animals, breeds, enterprises and environmental conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the nutrient and feeding requirements of a range of livestock
- indicators to monitor the level of feeding
- different types of agricultural feeds
- the factors that affect feed supply and demand for a farming operation
- management practices which maximise pasture growth and quality to best match herd/flock feed requirements
- the purpose of feed conservation in relation to enterprise feed supply and livestock requirements
- different types of pasture grazing systems, e.g. rotation, strip or block grazing
- ways of determining a feed surplus
- the effects of feed conservation on soil fertility and pasture regrowth
- the role of subdivision in effective pasture and animal management
- different supplementary feeding options for livestock
- environmental controls and codes of practice applicable to the business and to pasture management
- nutrient values of pasture and supplementary feedstuffs
- nutritive disorders in livestock and preventative measures
- enterprise livestock identification systems
- OHS legislative requirements
- codes of practice with regard to animal welfare and environmental protection.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills are the ability to:

- assess pasture health and condition
- assess herd/flock health and condition
- develop, implement and modify feeding plans
- observe, identify and react appropriately to environmental implications
- calculate and manipulate data when estimating and predicting supplementary feed requirements
- prepare written plans including scheduling for the acquisition and supply of supplementary feed for implementation by others
- purchase feed and maintain enterprise budgetary constraints
- handle livestock with due care
- identify livestock nutritional requirements
- read and interpret feeding plan
- communicate with property personnel and suppliers
- estimate and calculate livestock feed capacity and requirements, and calculate feed costings.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3115B**Unit Descriptor****Implement livestock husbandry practices**

This unit of competency specifies the outcomes required to perform livestock husbandry in an agricultural environment. It requires the application of skills and knowledge to administer preventative health treatments appropriate to assessed livestock needs, monitor and evaluate livestock post-treatment, and maintain records accordingly. The unit requires an awareness of enterprise and legislative requirements with regard to animal welfare, workplace safety and positive environmental practices. The work requires some judgement and discretion, and would be carried out under minimal supervision within enterprise guidelines.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for treatment of livestock.	1.1 Equipment and materials for treating livestock are checked for safe and sound operation and confirmed against work plan. 1.2 Livestock treatment site and facilities are prepared to industry standards in line with enterprise requirements. 1.3 Livestock treatments are prepared and confirmed against work plan in line with manufacturers specifications and work plan. 1.4 Potential and existing OHS hazards in the workplace are recognised, risk assessed and controlled in line with enterprise requirements.
2. Treat livestock.	2.1 Livestock are mustered safely, yarded, controlled, inspected and identified for treatment in line with enterprise requirements. 2.2 Safe workplace practices with regard to livestock handling are observed and implemented in line with OHS and enterprise requirements. 2.3 Treatment is administered in accordance with manufacturers specifications, enterprise and animal welfare legislative requirements. 2.4 Environmental implications associated with livestock husbandry practices are identified, assessed and relevant measures implemented.
3. Complete treatment process.	3.1 Livestock are prepared and moved along planned route without damage to person, property or environment. 3.2 Equipment, materials and facilities used for treatments are cleaned, maintained and stored in line with manufacturer specifications, OHS and enterprise requirements. 3.3 Livestock residues and waste are disposed of in an environmentally responsible manner in line with OHS and enterprise requirements.

4. Monitor effectiveness of treatment.	4.1 Livestock are monitored post-treatment for signs of treatment effectiveness.
	4.2 Livestock health and condition abnormalities are recognised and treated appropriately in accordance with enterprise requirements.
	4.3 Livestock treatment process and outcomes are detailed and recorded in line with enterprise requirements.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- administer preventative health treatments in accordance with work plan
- apply contingency measures for administering treatments in the event of adverse weather conditions
- assess and calculate herd/flock numbers, measure dosage and quantities
- carry out animal husbandry procedures
- clean and maintain treatment equipment, site and facilities to industry standards
- communicate abnormalities, equipment faults and workplace hazards, report and maintain treatment records
- demonstrate safe and environmentally responsible workplace practices
- monitor and minimise impacts to the environment associated with livestock production, and the use and disposal of hazardous substances
- monitor livestock behaviour and recognise abnormalities
- muster, move and control livestock
- prepare treatment site, facilities and equipment to industry standards
- provide due care and handle livestock humanely
- read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
- select and utilise equipment and materials appropriate for treating requirements and match to work tasks.

Required knowledge:

- enterprise policies with regard to treating livestock, recording and reporting routines
- environmental impacts and minimisation measures associated with livestock production, and the use and disposal of hazardous substances
- equipment and materials for treating livestock, their components and functions
- hazards associated with handling livestock and veterinarian medicines and chemicals
- livestock behaviour and basic health and nutritional requirements
- livestock health treatments, procedures and methods
- livestock husbandry practices
- livestock identification methods
- mustering and moving techniques
- personal protective clothing and equipment and when and how it should be used
- procedures for cleaning and maintaining treatment equipment and materials
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, animal welfare, and the use and control of hazardous substances.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

What ***equipment and materials*** may be used for treating livestock?

These may include crushes, mulesing shears, foot clipping secateurs, hand shears, machine shearing handpieces, livestock cradles, foot baths, dehorning equipment, livestock handling equipment, drench guns, vaccinating guns, dips, jetting plant, jetting guns, syringe and scales.

What ***livestock*** are covered?

Livestock covered by this unit of competency include beef cattle, alpaca, sheep and goats.

What may be included in a ***work plan***?

A work plan may include tasks (including type and application of treatments), equipment, resources and materials for use, equipment checks and maintenance procedures, supervisor instructions, timeframes for work completion, and reporting requirements.

Which ***enterprise requirements*** may apply?

Standard operating procedures, industry standards, production schedules, Material Safety Data Sheets, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and routine maintenance plans, may be included in enterprise requirements.

What ***preventative health treatments*** may apply?

Preventative health treatments may include, pizzle dropping, foot paring, clipping/grinding teeth, trimming horns, administering trace elements, giving injections, applying disinfectants, checking eyes and removing grass seeds, shearing dead livestock, collecting faecal samples, dipping, jetting, treating fly strike, caustic treatment of horn buds, mulesing/marking, administering hormonal treatments/agents, inspecting testicles, checking vulvas, checking ears, checking teeth, checking udders, drenching, weaning young, removing horns, and castration.

Which **OHS requirements** may be applicable?

These may include identifying hazards and assessing and reporting risks, and implementing safe systems and procedures for:

- handling of livestock aimed to prevent injury and illness including zoonoses control (Q Fever)
- manual handling, application and storage of hazardous substances (drenches, vaccines)
- outdoor work including protection from solar radiation, and dust
- appropriate use of personal protective clothing and equipment.

Which potential and existing **OHS hazards** may be encountered in the workplace?

Workplace hazards may include moving and handling livestock and machinery, solar radiation, dust, and other hazardous substances (i.e. veterinary chemicals).

How might the **safe mustering** of livestock be achieved?

This may include the application of controlled and calming techniques (including the restraint of working dogs) to minimise stress to livestock and prevent risks to young livestock of smothering.

How might **livestock** be controlled?

For example, safely caught and restrained (with or without use of animal handling equipment).

What **health conditions** may livestock be inspected for?

Lesions, abscesses, parasites, cancers, abnormal growths, lice/ticks, and footrot.

How might livestock be **identified** for treatment?

Eartags, earmarks, raddle, sprays, silicon chips, tattoos, collar tags, and leg bands.

What **environmental implications** may be associated with livestock husbandry practices?

Negative environmental impacts may result from the unsafe use and disposal of veterinarian chemicals (dipping, jetting, internal and external parasite control), and any consequent residual chemicals. Impacts may also result from high concentrations of livestock on ground cover causing run-off flows, loss of ground cover, soil disturbance, pugging, dust problems, weed seeds in animal manure, contamination of ground and surface water supplies, and odours.

What **considerations** may be involved in preparing and moving livestock?

This may include giving livestock time to settle post-treatment, conducting the move in a controlled and quiet manner to correct paddock, and ensure the closure of gates.

What **livestock residues** may be disposed of?

Residues may include skin, testes, teeth and horn clippings, and carcasses, and may be disposed of by burning, burying, or removal to safe site.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in implementing livestock husbandry practices requires evidence of the ability to assess livestock health status, and prepare and administer appropriate preventative health treatments according to work plan. It involves selecting, using and maintaining specialised equipment, the ability to muster, move and handle livestock, prepare treatment site, facilities and equipment to industry standards, determine treatment methods, monitor treatment effectiveness, report and treat abnormalities, and maintain records. Evidence must also be demonstrated in the employment of safe workplace and environmentally responsible practices associated with livestock husbandry. The skills and knowledge required must be **transferable** to a different work environment. For example, if competence is evident in the practise of livestock husbandry in the goat production industry, it must also be evident in performing livestock husbandry practices in other sectors of the rural industry.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (1) be applied?
 - Information and ideas with regard to treatment and equipment application methods, and identification of any complications or abnormalities in livestock may be discussed with the supervisor and work team.
- How can information be collected, analysed and organised (1)?
 - Information with regard to applied treatments and effectiveness may be observed and monitored for analysis, and organised by records and reports.
- How are activities planned and organised (2)?
 - Activities involving mustering and moving livestock may be planned and coordinated around treatment schedules, or sequenced as required.
- How can team work (1) be applied?
 - Team work may be applied in mustering, moving and yarding livestock to treatment site, and during the treatment process.
- How can the use of mathematical ideas and techniques (2) be applied?
 - Mathematics may be applied in the calculation and measurement of treatment dosage and dosage/treatment frequency.
- How can problem-solving skills (2) be applied?
 - Contingencies for adverse weather conditions may be planned and prepared to minimise disruption to treatment schedules, and alternative plans may be needed if complications occur when moving, yarding or treating livestock.
- How can the use of technology (1) be applied?
 - To communicate, record and calculate information with regard to the administering of preventative health treatments.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3116A

Unit Descriptor

Mate and monitor livestock

This competency standard covers the process of undertaking the monitoring and mating of animals. Competency requires the application of knowledge and skills to identify appropriate mating plans, select appropriate sires and/or semen, and monitor female condition and weight. Competency also requires the ability to monitor mating and take remedial action where needed, to record data, and monitor and report on the effectiveness of the mating program. The work is likely to be carried out with limited or no supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Identify animal condition	1.1 Condition of animals is accurately determined and scores are recorded according to recognised industry practices. 1.2 Animals are ranked according to scores and nutritional requirements adjusted to facilitate optimum condition. 1.3 Feeding strategies are appropriate to animals environment and seasonal conditions. 1.4 Judgements on animal conditions are based on verifiable information.
2. Facilitate mating	2.1 Oestrus inducement and detection procedures are carried out according to established industry practice. 2.2 Mating areas are secure and provide for access during joining. 2.3 Mating procedures and handling techniques that minimise stress and discomfort to livestock and meet OHS requirements are used. 2.4 Mating is supervised and intervention when required is undertaken to maximise conception rates.
3. Complete mating procedures	3.1 Artificial insemination techniques are carried out, when required, according to recognised industry codes of practice. 3.2 Pregnancy detection techniques are applied at earliest opportunities to identify suitable action and condition of animals. 3.3 Hygiene procedures are applied to ensure sterility of environment. 3.4 Records of mating and insemination are recorded accurately, legibly and according to enterprise and industry requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Discuss insemination procedures and requirements with other staff, supervisors and semen suppliers.	2
Collecting analysing and organising information	Mating records, sire use, pregnancy test results and targets may be observed and monitored for analysis, and organised by records and reports.	2
Planning and organising activities	May be planned to ensure that semen arrives on time, and that sufficient number of females are available to meet mating targets.	2
Working with others and in teams	Team work may be applied to ensure mating targets are met consistently.	2
Using mathematical ideas and techniques	Mathematics may be applied to calculate oestrus cycles, sire use, and semen dilution.	2
Solving problems	Insemination procedures may require remedial action to ensure correct semen is identified, and to avoid any complications at the time of insemination. Mating may require re-joining and infertility cause may need to be determined.	2
Using technology	To record data and to test for pregnancy.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What animals are covered by this unit?	This unit covers beef and dairy cattle, sheep and goats, horses and pigs.
How might animals condition be accurately determined?	Physical observation, condition scoring, weighing, age, pregnancy status, and conditions of coat.
What nutritional requirements might be relevant to this standard?	Those that relate to dry females and may be identified from authoritative and reliable sources such as vets, books, supervisors, other farmers, government departments, feed suppliers and breed societies.

How might oestrus detection occur?	Observation of clinical signs, backpressure test, or other recognised tests.
What OHS requirements are relevant to this standard?	Safe livestock handling systems and procedures including zoonoses control (Q Fever), identify hazards, assess and report risks, and safe manual handling systems and procedures. Safe systems and procedures for the application and storage of hazardous substances (drenches, vaccines), the handling of veterinary equipment (syringes, needles, vaccines), and the appropriate use of personal protective equipment.
What intervention might occur?	Use of harnesses and assistance in the joining process.
What artificial insemination techniques might be employed?	Collection of semen on farm, or use of commercial semen. Semen needs to be stored at the correct temperature prior to use, and in a safe and secure environment. Straws need to be checked for correct sire identification and semen, if frozen, is thawed in readiness for insemination.
What suitable action may need to be taken as a result of the pregnancy test?	Re-joining where female is not pregnant and provision of extra nutrition where appropriate if pregnant.
What hygiene procedures need to be considered?	Sterile equipment and clean work sites are essential to the insemination process. Cleaning of pen as required.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in monitoring and mating animals requires evidence of the ability to monitor female's condition, revise feeding strategies, detect oestrus cycles, implement breeding plans using farm collected or imported semen, supervise mating, and pregnancy test, identify and implement action as a result of pregnancy test as required, and record data.

The skills and knowledge required to monitor and mate animals must be transferable to another workplace. For example this may include different animal breeds and different breeding programs.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- female conditioning
- oestrus cycles
- anatomy and physiology of male and female reproductive systems in animals
- factors affecting semen viability
- pregnancy testing
- animal health and abnormalities
- semen thawing techniques
- preparation requirements for artificial insemination of animals
- livestock movement and behavioural characteristics
- handling and assisted joining techniques, restraint methods and when to use them
- enterprise and industry identification system for livestock
- personal protective equipment and when and how it should be used
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and animal welfare
- legislative and regulatory controls with regard to artificial insemination

- enterprise and industry policies with regard to artificial insemination, and recording and reporting routines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- accurately condition score dry females
- supervise animal mating and assist as appropriate
- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- collect semen
- artificially inseminate animals
- store and use commercial semen
- conduct pregnancy tests
- employ safe work practices
- clean up work site and safely dispose of waste
- communicate effectively with other teams members, veterinarians and/or licensed inseminators.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3117A

Unit Descriptor

Co-ordinate milking operations

This competency standard covers the functions required to co-ordinate the milking operations of a dairy herd.

It requires skills and knowledge to manage and co-ordinate the safe, hygienic and efficient conduct of milk harvesting to ensure maximum yield and minimum stress to livestock. In addition, milking operations include an integrated livestock health strategy to ensure the health and wellbeing of livestock. This work requires the application of some judgement and discretion, and is likely to be carried out independently within own area of responsibility.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Determine requirements	1.1 Production requirements are identified and clarified according to enterprise objectives. 1.2 Requirements for the maintenance of milk quality are identified and complied with according to industry standards. 1.3 Resources and equipment requirements are determined and maintained according to enterprise budgetary constraints.
2. Determine milking procedures	2.1 Milking schedules and milking policy is determined according to enterprise requirements . 2.2 Water supplies are checked for availability, and milking equipment is checked and adjusted, as required, to ensure correct operating order. 2.3 Milking procedures are implemented under a range of conditions, with minimum stress to livestock and maximum yield within reasonable timeframes. 2.4 Minor malfunctions of equipment or milking systems are rectified to manufacturers specifications, and more complex repairs are reported for specialist attention. 2.5 Safe workplace practices are implemented and reinforced according to OHS and enterprise requirements.

3. Implement livestock health treatment program	3.1 Livestock health and condition is monitored according to health strategy and enterprise requirements. 3.2 Livestock testing is carried out according to health strategy and remedial action is taken, as required, according to veterinary guidelines and enterprise requirements. 3.3 Livestock health treatments during drying off are carried out as directed with minimal stress and weight loss according to veterinary guidelines and enterprise requirements. 3.4 Handling practices are implemented to prevent cross-infection during milking operations according to enterprise requirements. 3.5 Milk samples are taken in accordance with industry standards and guidelines and labelled correctly. 3.6 Livestock health records are accurate and maintained according to industry standards and enterprise requirements.
4. Co-ordinate and monitor milking operations	4.1 Milking procedures are monitored for efficiency, effectiveness and compliance with enterprise requirements. 4.2 Milk quality is monitored and maintained according to industry standards and enterprise requirements. 4.3 Costs are monitored to ensure operations are completed and maintained within budget. 4.4 Work areas and equipment are cleaned to industry standards and waste disposed of in an environmentally responsible manner. 4.5 Relevant data is documented for analysis and effecting planning management.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Ideas and information with regard to operational procedures may be discussed with the industry network.	2
Collecting analysing and organising information	Information with regard to production and milk quality may be detailed and organised by reports for analysis.	2
Planning and organising activities	Maintenance and cleaning activities may be planned and co-ordinated with milking routines or sequenced as required.	2
Working with others and in teams	Team work may be applied in methods and procedures to maintain budgets and achieve production requirements.	2
Using mathematical ideas and techniques	Mathematical techniques may be applied to calculate yield and production.	2
Solving problems	Machinery and equipment malfunctions will need to be arranged for repair or replacement to prevent disruption to milking schedules.	2
Using technology	Technology may be used to communicate, measure and record information.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What may be involved in maintaining milk quality?

This may include maintaining milk within the required temperature range, the implementation of hygiene procedures to prevent cross-infection, and tracing and solving causes of poor milk quality.

What resources and equipment may be required?

These may include:

- milk harvesting equipment
- milk cooling and refrigeration equipment
- emergency power supply
- yard washing equipment
- waste management system equipment
- feeding equipment
- dairy herd drenching equipment
- teat spray equipment
- hot water service
- fly control systems.

What information may be included in an enterprise milking policy?

A milking policy may relate to am and pm times of milking, cattle handling to the dairy and during milking, milking procedures, speed of milking, udder washing and preparation, udder and teat checking and treatment, animal observation and identification for special treatment, general hygiene in relation to milk quality, herd health and operator health.

What enterprise requirements may be applicable?

SOP, industry standards, production schedules, MSDS, work notes and plans, product labels, manufacturers specifications, operators manuals, and enterprise policies and procedures (including waste disposal, recycling and re-use guidelines).

How might milking systems vary?

Milking systems may be either manual or automatic.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- the operation and maintenance of machinery and equipment including hydraulics and guarding of moving exposed machine parts
- livestock handling including zoonosis and leptospirosis control
- the protection against electrical hazards
- handling hot water and protection from scalds
- outdoor work including protection from solar radiation
- use of relevant personal protective equipment
- use of chemical and biological agents.

How might livestock health and condition be assessed?

Assessment may be by direct observation of general health and soundness, checks of performance, and inspection of livestock records.

What working areas and equipment may be cleaned?

This may include milk harvesting equipment, milk cooling and refrigeration equipment, yards and pens.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in co-ordinating milking operations requires evidence of the ability to co-ordinate the operational functions of a dairy to ensure maximum sustainable returns to the enterprise. It also requires the ability to recognise and rectify machinery malfunctions, schedule milking operations, conduct livestock testing, participate in livestock recording programs, implement drying off programs according to livestock health strategy, and maintain costs within enterprise budgetary constraints. Evidence must also be demonstrated in the implementation of safe workplace and positive environmental practices.

The skills and knowledge required to coordinate milking operations must be transferable to a different work environment. For example, this may involve different animals, milking sheds, routines and enterprise policies.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- functions and controls of the components of milk harvesting, cooling and refrigeration, and ancillary equipment
- mechanical operation of a milking plant and the steps necessary for operation
- industry standards and relevant codes of practice with regard to milking operations
- procedures for testing milk quality
- causes of poor milk quality
- type and control of health problems in dairy cattle including mastitis prevention
- factors impacting on livestock stress and minimisation procedures
- water quality and affecting factors
- hygiene requirements and cleaning systems used for milking equipment
- relevant OHS legislation, regulations and codes of practice
- livestock behaviour and nutritional requirements
- lactation in livestock and effect of body reserves, and dietary energy intake on lactation
- milk quality tests.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- determine machinery maintenance requirements
- schedule and arrange resources
- maintain satisfactory milk quality
- analyse and interpret livestock testing data
- monitor livestock health and identify health problems
- anticipate emergencies and remove hazards in the workplace
- interpret and use written and oral information
- implement strict standards of hygiene.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3118A**Implement feeding plans for intensive production****Unit Descriptor**

This competency standard covers the process of implementing feeding plans in an intensive animal production enterprise. It requires the interpretation of schedules and plans, the preparation and feeding of milled and supplementary feed as well as a clear understanding of the procedures to be undertaken and the targets to be met.

When the requirements of this standard are met employees understand the role their work plays in maintaining quality output and support management in detecting, solving, correcting and preventing problems.

Implementing feeding plans is likely to be under limited supervision from others with checking only related to overall progress. The work may involve some responsibility for others and is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of feeds, equipment and materials, organisation of work, to achieve outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Interpret livestock feeding plans	1.1 Livestock condition is assessed and recorded according to industry standards and enterprise requirements . 1.2 Livestock production status is identified according to enterprise requirements. 1.3 Livestock nutritional requirements and the nutritional value of feedstuffs are identified. 1.4 Feeding plan is confirmed and adjusted as required, appropriate to livestock condition and essential nutritional requirements.
2. Prepare for feeding	2.1 Work to be undertaken is interpreted from feeding plan. 2.2 Decisions are made concerning dietary elements for particular rations. 2.3 OHS hazards are identified, risk assessed and suitable controls implemented. 2.4 Suitable personal protective clothing and equipment is selected, used and maintained. 2.5 Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary. 2.6 Environmental implications of undertaking work are identified, likely outcomes assessed and, if necessary, responsible action taken.

3. Mix feed	3.1 Scales and containers to be used for measurements are calibrated according to the manufacturers instructions. 3.2 Ingredients are identified from instructions and obtained from storage locations. 3.3 Ingredients are measured in the specified ratios and quantities. 3.4 Ingredients are blended adequately and hygienically in the manner specified and using the appropriate equipment. 3.5 Where milling is required, it is done in the manner specified and using the appropriate equipment. 3.6 OHS hazards are identified, risk assessed and suitable controls implemented. 3.7 Suitable personal protective equipment is selected, used and maintained.
4. Conduct hygiene and administration activities	4.1 Equipment is cleaned according to manufacturers specifications and organisational procedures to maintain hygiene standards. 4.2 Information gathering, collation and presentation is undertaken promptly, efficiently and accurately. 4.3 All required records and documentation are completed accurately and promptly according to organisational requirements.
5. Order and store feed and ingredients	5.1 Ingredients previously selected are ordered from the supplier according to organisational protocols. 5.2 Ingredients and feed are stored safely in the location and manner determined by the supervisor. 5.3 Stock is rotated and replacements are ordered to arrive at the appropriate time to ensure optimum freshness. 5.4 All required records and documentation are completed accurately and promptly according to organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communicating with employer and feed merchants regarding performance of nutrition of livestock.	2
Collecting analysing and organising information	Collecting, analysing and organising information in preparing to measure, weight and mix feed.	3
Planning and organising activities	In ordering, storing and rotating feed in the silos and the shed(s).	2
Working with others and in teams	Working with teams and others in assisting with the movement of ingredients.	3
Using mathematical ideas and techniques	Using mathematical ideas and techniques in calculating premix weights or medications.	2
Solving problems	Solving problems in identifying and reporting production drops coinciding with feed changes.	2
Using technology	Using technology in operating grinders, forklifts, and with calculating equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What livestock are covered by this unit?	Livestock covered by this unit include pigs and poultry in all production systems, shedded sheep, feedlot and dairy cattle.
How might livestock condition be assessed?	Livestock condition may be assessed by weighing, condition scoring, and body condition.
What enterprise requirements may be applicable?	SOP, industry standards, production schedules, MSDS, work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and managers oral or written instructions.
What information may be included in a feeding plan?	Feeding plans may include information with regard to supplementary feeding pattern, feed purchases, minimum livestock condition levels, and production requirements.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below:

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise, gases and organic dusts.

Fixtures should be in place in all storage sheds including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained.

Procedures should be in place and used. Persons should not be allocated tasks that they are not competent to perform.

Record keeping should ensure that requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective clothing and equipment may be relevant to this standard?

Boots, hats/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

Will the feed always be mixed on-site?

Not necessarily. In some organisations it is more common to feed the livestock pre-prepared feed with occasional additives, but in others there is a preference for feed measured and mixed on-site.

What are the ingredients of a feed mix?

The mix might consist of prepared and formulated proprietary rations, liquid feeds, whole grains, protein additives, and/or vitamins and minerals.

A feed mill operation is considered to be a food manufacturing facility, and should be operated under the same hygiene expectancy as human facilities. What will this require?

This will require rodent control, dust management, no rat or bird faecal contamination of feeds or raw ingredients, and feed not being wet.

What may feed milling include?

It may include hammer milling and roller milling.

How might information be documented?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What actions will require documentation?

All chemical usage should be recorded as well as any necessary recording of vehicle and equipment use in logbooks, for example. Additionally, any assessment of pests and weeds, quality, module weights, breakdowns and yield should be recorded appropriately.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in implementing feeding plans for intensive production requires evidence that feeding plans are accurately interpreted and resources are allocated efficiently to achieve the required outcomes.

The skills and knowledge required to coordinate and monitor intensive production performance must be transferable to a different work environment. For example, this could include different production systems as well as a range of livestock breeds and classes.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- silo operations and configuration, machinery and operating practices
- cleaning and storage of machinery, equipment and materials
- enterprise recording and reporting procedures
- raw ingredients - grains, meals
- vitamins, minerals and premix formulations
- the implications of grain incorporating chemical, insect and fungal contamination - this includes an awareness of the industry process already to monitor these contaminants - the National Residue Survey (NRS), the National Antibiotic Residue Minimisation (NARM), and programmed basket surveys
- safe operation of machinery
- contaminants of raws and meals that could reduce performance - seeds, moulds, nutritional and disease factors which can influence product quality
- evidence of spoilage and handling spoilt feeds.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- identify a range of grain types and qualities
 - identify grain contaminants
 - identify premixes and weigh out
 - mix feeds and ingredients
 - identify basic mixing problems
 - relate flock performance data to ration consistency
 - recognise and rectify minor operational faults
 - read and interpret manufacturers specifications, work and maintenance plans, and Material Safety Data Sheets
 - interpret and apply task instructions, communicate with work team and supervisor, and record and report faults, workplace hazards and accidents
-
- measure and calculate volumes and consumption requirements
 - complete records and documentation of feed use and volumes for the shed
 - take and prepare feed samples for dispatch to the laboratory
 - use machinery and equipment associated with mixing and milling feed, such as augers and mills
 - perform routine maintenance of milling and mixing equipment
 - take silo readings.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3119A**Unit Descriptor****Euthanase livestock**

This competency standard covers the process of destroying livestock without distress or suffering prior to cessation of their vital life functions. It requires the ability to prepare for euthanasia, carry out euthanasia of animal, and clean and store equipment and materials. Euthanasing livestock requires knowledge of OHS regulations and safe practice in euthanasing animals, enterprise euthanasia action plans, animal handling and behaviour, anatomy and physical features of the animal, and animal welfare.

Note: Where euthanasing involves firearms, appropriate licences are required for those involved in training and assessment against this unit of competency.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for euthanasia	1.1 Criteria for decision to destroy livestock conform to enterprise euthanasia action plan and approval of supervisor where required. 1.2 Method selected to destroy livestock conforms to enterprise euthanasia action plan. 1.3 Equipment and materials required to complete the euthanasia are prepared. 1.4 Hazards associated with the euthanasia are identified in accordance with OHS standards. 1.5 Environmental and public safety risks associated with the euthanasia are identified in accordance with statutory and local authority requirements. 1.6 Licences and permits required to complete euthanasia are obtained where necessary. 1.7 Equipment and materials for euthanasia are checked and prepared in accordance with statutory requirements and industry practice.

2. Carry out euthanasia of animal	2.1 Personal protective and safety equipment is used in accordance with OHS standards and statutory requirements. 2.2 Equipment is handled and transported safely at all times in accordance with statutory requirements and industry practices. 2.3 Animal is physically restrained in a way that minimises pain and distress. 2.4 Animal is killed in a quick and painless way in accordance with animal welfare regulations and statutory requirements. 2.5 Animal is checked to ensure it is dead. 2.6 Animals that have not been killed immediately are destroyed in a humane manner in accordance with animal welfare regulations and statutory requirements. 2.7 Carcasses that are required for research or commercial use are handled as required, in accordance with the animal management strategy and action plan. 2.8 Animal carcasses that are not required for research or other purposes are disposed of as required, in accordance with statutory requirements and industry practice.
3. Clean and store equipment and materials	3.1 Carcasses for research or commercial use are cleaned and stored in accordance with relevant policies and procedures and industry practice. 3.2 Equipment and materials are cleaned and stored in accordance with relevant standards and policies. 3.3 Job completion is reported or recorded in accordance with relevant policies and procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Clarify requirements and expectations for the job and liaise with supervisor.	1
Collecting analysing and organising information	Determine requirements for method and timing of euthanasia.	2
Planning and organising activities	Organise own work activities.	2
Working with others and in teams	Collaborate with work colleagues during work activities.	2
Using mathematical ideas and techniques	Estimate material requirements and assess scope of job.	2
Solving problems	Consider problems that arise during the job and determine contingency activities.	1
Using technology	Use and maintain equipment and materials.	2

RANGE STATEMENT

The Range of Variables defines the different contexts, work environments and parameters governing the performance of this unit of competency. The variables chosen in training and assessment will need to reflect local industry and regional contexts.

What decision-making criteria are relevant in this standard?

Decision-making criteria include:

- pain and distress of the animal
- likelihood of recovery
- ability to get to feed and water
- medications used on the animal
- drug withdrawal time
- economics
- condemnation potential
- diagnostic information.

Which livestock may be included in this standard?

Livestock that are required to be destroyed under the enterprise euthanasia plan for one or more of the following reasons:

- irreparable fracture limbs causing severe trauma
- loss of production
- quality of life
- inability to stand or walk
- diagnostic reasons such as potential to cause human disease
- debilitating or toxic condition
- cost of treatment prohibitive and poor prognosis
- extended withdrawal time for sale of meat and poor prognosis.

What methods may be selected for euthanasing livestock?

For small animals, euthanasia methods may include cervical dislocation, gunshot, captive bolt, and exsanguination.

For large animals, euthanasia methods may include gunshot and captive bolt.

Note that ethical and humane standards of euthanasia do not permit the following methods of euthanasia for large animals: manually applied blunt trauma to the head, injection of chemical agents into conscious animals, air embolism, electrocution and exsanguination.

What might be included as equipment and materials?

Firearms, knives.

What are the relevant statutory and local authority requirements that may impact on euthanasia of livestock?

Environmental protection, animal welfare, use of firearms (including licensing requirements and exemptions), humane treatment of animals, poisons and veterinary substances, identification and reporting of suspected outbreaks of exotic disease, OHS regulations, and common law principles relating to property, stock, duty of care and due diligence.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in euthanasing livestock requires evidence that animals have been destroyed in a humane way that minimises pain and distress according to enterprise guidelines and industry best practice.

The skills and knowledge required to euthanasing livestock must be transferable to a range of work environments and contexts. For example, this could include different animals, methods of euthanasia and enterprise action plans.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- OHS regulations and safe practice in euthanasing animals
- statutory legislation and requirements related to euthanasing livestock
- enterprise euthanasia action plans
- animal handling and behaviour
- anatomy and physical features of the animal
- animal welfare
- where firearms are used, procedures appropriate to the firearms safety and handling.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- prepare for euthanasia
- carry out euthanasia of animal
- clean and store equipment and materials.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3120A

Unit Descriptor

Prepare facilities for shearing and crutching

This competency standard includes the functions required to ensure the safety and hygiene standards of facilities and equipment prior to shearing and crutching operations, and is undertaken by the owner/classer with assistance from wool handlers.

It requires the application of skills and knowledge to determine and perform minor repairs and maintenance, check equipment for correct operation, and dispose of contaminants.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Inspect facilities and equipment	1.1 Facilities are inspected and assessed for hygiene and safety according to industry standards and OHS requirements. 1.2 Equipment faults or malfunctions are identified and reported for repair or replacement according to enterprise requirements . 1.3 Potential and existing hazards are identified, controlled and reported according to OHS requirements.
2. Prepare facilities	2.1 Suitable personal protective equipment is selected, used and maintained according to OHS requirements. 2.2 Shed staff are engaged in the removal of contaminating substances according to enterprise and environmental requirements. 2.3 Shed staff are directed/assisted in the cleaning of facilities and equipment to industry standards and hazards are eliminated according to OHS requirements.
3. Prepare equipment and materials	3.1 Shed staff are directed/assisted in the positioning of tables and equipment. 3.2 Bins/wool pack holders are placed in strategic positions. 3.3 Shed staff are directed/assisted in the positioning of brooms/scrapers. 3.4 Discussions are held with the presser in relation to their understanding of the property requirements.
4. Pen Sheep	4.1 Seek advice from owner/shed manager on sheep to be shorn first and location within the shed pens. 4.2 Work with other shed staff to pen sheep for shearing according to enterprise guidelines and owner/shed manager instructions.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to the needs may be discussed with the manager and work team.	1
Collecting analysing and organising information	Information and instructions with regard to industry requirements for the preparation of shearing facilities may be accessed and referred.	1
Planning and organising activities	Basic repairs and maintenance to equipment and facilities are carried out prior to shearing operations.	2
Working with others and in teams	Team work may be applied in the efficient preparation of safe and hygienic shearing equipment and facilities with timeframes.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calculation of throughput of sheep and the number of wool packs required.	1
Solving problems	Problems of adverse weather conditions for livestock may be resolved by the provision of suitable shelter.	1
Using technology	Technology may be used to communicate.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What types of facilities may be inspected and assessed?

Facilities may include shearing and wool handling area of the shearing shed. It may also include bin labelling for fleece and non-fleece types.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- hazard and risk control measures
- manual handling, including lifting and carrying
- fleece handling and harvesting
- the protection from electrical hazards, hazardous noise and organic and other dusts
- the handling and storage of hazardous substances
- the appropriate use of personal protective equipment.

What enterprise requirements may apply to this standard?	SOP, industry standards, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use), and reporting requirements.
What existing and potential hazards to health and safety may be identified?	Hazards may include loose floor boards and protruding nails, inadequately maintained, unguarded and faulty equipment, inappropriately located electrical leads and cabling, exposure to fuel and other chemicals (e.g. diazinon), exposure to excessive noise and dust, exposure to solar radiation, inadequate lighting in handling areas, stairs and ramps, inadequate ventilation, and draught control.
What types of shearing equipment might be checked?	This may include wool tables, wool pack holders, wool bins, brooms/scrapers and wool presses.
What fleece/fibre contaminants might be identified for removal?	This may include burrs and vegetable matter, shed debris, dust, chemicals, dark or medullated fibre, non-animal fibrous material (poly-propylene, jute, other rope, strings), non-sheep fibres (feathers, dog, rodent, cattle and goat hair), solid objects and rubbish.
What cleaning may be required?	Hygiene of the shearing shed and wool handling areas must be strictly controlled and will require the removal of all pieces of fleece/fibre, dirt, dust and any polypropylene fibre.
What range of materials and supplies may be provided for shearing operations?	This may include brooms, board scrapers, stencils and ink, fleece bins and rubbish bins, paddles, wool press, trolley, bale hooks and fasteners, non-contaminating branding fluid, and first aid supplies.
What basic maintenance procedures may be carried out?	This may include minor repairs to shearing board and wool room floor, and catching pens.
What relevant information may be documented?	This may include details of equipment faults or malfunctions, maintenance requirements and repairs carried out, and identified hazards for the attention of the shearing team.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in preparing facilities for shearing and crutching requires evidence of the ability to recognise and remove hazards from shearing shed, and carry out cleaning to industry standards. It also requires the ability to arrange for the provision of materials and supplies, identify and carry out minor repairs.

Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices.

The skills and knowledge required to prepare facilities for shearing and crutching must be transferable to a different work environment. For example, this could include different sheep and wool types, shearing sheds and enterprise arrangements.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- maintenance and hygiene requirements of shearing sheds, boards and catching pens
- environmental codes of practice with regard to livestock production
- OHS legislative requirements
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- maintain contamination and hazard-free environment for shearing and wool handling
- recognise and remedy health and safety hazards
- carry out minor maintenance and repairs to equipment and facilities
- disposal of waste in an environmentally responsible manner
- read and interpret MSDS and manufacturers specifications
- communicate verbally with work team, and comprehend and apply task instructions.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3121B**Unit Descriptor****Prepare animals for parturition**

This unit of competency specifies the outcomes required to feed and care for animals through the latter stages of pregnancy to birthing. It requires the application of knowledge and skills to assess and provide appropriate nutritional and environmental requirements for pregnant animals, perform husbandry procedures and implement measures for the safeguard of newborn animals. In addition, the unit requires an awareness of workplace safety and positive environmental practices associated with animal production. The work functions in this unit involve the application of some judgement and discretion and are likely to be carried out under minimal supervision within enterprise guidelines.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify and provide animal nutritional needs.	1.1 Nutritional needs of pregnant animals are identified and confirmed against the enterprise feeding plan. 1.2 Feed and feed supplements are determined and provided in accordance with the feeding plan and local conditions . 1.3 Procedures to minimise feed wastage and spillage, and dispose and recycle feed waste are implemented in line with enterprise requirements . 1.4 Existing and potential OHS hazards in the workplace are identified, risk assessed and controlled in line with enterprise requirements.
2. Monitor feeding process.	2.1 Feeding process is monitored to ensure animals are feeding effectively in accordance with the feeding plan. 2.2 Feeding abnormalities are recorded and reported in line with enterprise requirements. 2.3 Environmental implications associated with animal production are identified, assessed and relevant measures implemented.
3. Maintain a secure environment for animals.	3.1 Condition and security of paddocks, shelter and/or housing is monitored and maintained in line with enterprise requirements. 3.2 Basic repair work is carried out and reported as required in line with OHS and enterprise requirements. 3.3 Predators to newborn animals are monitored, risk assessed and reported in line with workplace procedures. 3.4 Environmentally responsible measures to eradicate or control identified predators are implemented safely in accordance with relevant legislative requirements.

4. Carry out animal husbandry procedures.
 - 4.1 Animals are **prepared** for birthing in accordance with enterprise requirements.
 - 4.2 **Preventative health treatments** are determined and administered to animals to manufacturer specifications and recorded in line with enterprise requirements.
 - 4.3 **Contingency measures** are prepared and implemented as required.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- administer preventative health treatments
- assess and calculate herd/flock numbers, measure feed, assess rate and frequency of feeding, and calculate animal gestation
- carry out animal husbandry procedures, and provide due care and handle animals humanely
- collect, store and administer colostrum
- communicate abnormalities, workplace hazards and report and maintain animal records
- employ safe and environmentally responsible systems and procedures with regard to the handling of animals, feed, hazardous substances and firearms
- implement contingency measures in the event of adverse weather or birthing difficulties
- maintain animal shelter and farrowing housing including basic repairs
- match supply of grazing or predetermined rations, feed and feed supplements to meet feeding plan and nutritional requirements for pregnant animals
- monitor animal health and condition and recognise abnormalities
- monitor and minimise impacts to the environment associated with animal production and the use and disposal of hazardous substances
- read and interpret manufacturers specifications, work and feeding plans, and material safety data sheets
- safely implement predator control strategies.

Required knowledge:

- animal behaviour and nutritional requirements of pregnant animals
- animal husbandry procedures
- effects of weather conditions, and inadequate nutrition on pregnant animals and their newborn
- enterprise policies with regard to birthing animals, recording and reporting routines
- environmental impact of animals on ground cover and minimisation measures
- environmental impact of the use and disposal of hazardous substances and minimisation measures
- feed and feed supplements for pregnant animals and when to provide them
- hazards associated with handling animals and veterinarian medicines and chemicals
- pasture and animal grazing management
- personal protective clothing and equipment and when and how it should be used
- physiological and behavioural signs of impending birth
- predators and behaviour patterns, and control and eradication measures
- preventative health treatments, procedures and methods
- relevant licensing and permit requirements (firearms)
- State/Territory legislation, regulations and codes of practice with regard to OHS, animal welfare, poisons and firearm safety
- sustainable land management practices.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

How might the ***nutritional needs*** of pregnant animals vary?

This may depend on the breed, weight and condition of the animals, stage of pregnancy, lactation requirements, and season/climactic conditions.

What ***animals*** are covered?

Animals covered by this unit of competency include cows and heifers (beef and dairy cattle), ewes (sheep), does (goats), hembras (alpaca), sows (pigs) and mares (horses).

What might be included in a ***feeding plan***?

Target weights, amount and type of feed and feed supplements, feeding frequency and rates, feeding methods and procedures, weed control strategy, supervisors instructions, reporting and recording requirements.

What range of ***feed and feed supplements*** might be provided to animals?

Hay, grain, predetermined rations, trace elements, vitamins and sources of nutrients including silage, paddock feed, grain legumes, mineral blocks, protein meals, calcium and other nutrient supplements, and specific purpose feeds.

What ***local conditions*** might be considered when determining nutritional needs for animals?

Paddock conditions including availability, quality and quantity of water and feed supplies, and weather conditions.

What ***procedures*** might be implemented to minimise feed wastage and spillage?

The accurate measurement of feed quantities, the use of precise measurement devices and apparatus, and the accurate determination of animal feed requirements.

What ***enterprise requirements*** may apply?

Standard operating procedures (SOPs), industry standards, production schedules, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, and work and feeding plans.

What **OHS requirements** may be applicable?

Identify hazards, assess and report risks. Safe systems and procedures for animal handling including zoonoses control (Q Fever, leptospirosis), handling and storage of grain and feed to reduce risk associated with organic and other dusts, application and storage of hazardous substances (drenches, vaccines, baits), outdoor work including protection from solar radiation, protection from dust, and the appropriate use of personal protective clothing and equipment, firearms handling and storage, and manual handling.

What existing and potential **hazards** may be encountered in the workplace?

Animal movement and handling, solar radiation, organic and other dusts, excessive noise, hazardous substances (veterinary chemicals, poisons), moving machinery and unsafe firearms handling and storage.

What feeding abnormalities may be observed?

This may include the general observation of sick animals, shy feeders, weight loss, scouring, greedy (bossy) feeders and ill thrift.

What environmental implications may be associated with animal production?

Negative environmental impacts may result from the unsafe use and disposal of poisons and veterinarian chemicals (vaccinations, drenching, blowfly control), and any consequent residual chemicals. Impacts may also result from high concentrations of animals, particularly in holding or confined areas, causing increased run-off flows and/or wind erosion, loss of ground cover, soil disturbance, pugging, dust problems, weed seeds in animal manure, contamination of ground and surface water supplies, and odours.

What factors may be considered when assessing the condition and **security of animals' environment**?

Weather protection (wind, rain, snow, heat) and the availability of feed and water supplies. Other factors may include the provision of "lamb/kid proof" water troughs, paddocks that are suitable to the size of herd/flock, adequate shelter and housing, and safe fencing and yards.

What **basic repair** work might be carried out?

Maintenance repairs to fencing, yards, shelter and housing.

What predators may be identified as a risk to newborn animals?

Dogs (domestic and wild), dingoes, feral cats and wild pigs.

What **safe measures** might be implemented to **eradicate or control predators to newborn animals**?

Shooting, trapping, poisoning, fencing, spot or neon lighting, and guard dogs. Safety considerations may include the minimisation of risk and danger to non-predatory animals, livestock, humans and the environment including the safe laying of traps, secure fencing, and the safe use of firearms and poisons.

What **legislation** may be relevant?

Control of Use Acts, OHS Acts and codes of practice regarding hazardous substances and application equipment, Poisons Schedule, Protection of the Environment Act, State/Territory Firearms Acts and Regulations, and State/Territory Animal Welfare Acts and Regulations.

What may be involved in **preparing animals for birthing**?

Dogs and ewes are crutched or shorn prior to birthing.

What **preventative health treatments** might be administered?

Vaccinations, drenching, and for sheep blowfly control, adjust diet to prevent constipation in sows.

What type of **contingency measures** may be planned?

Emergency procedures in the event of adverse weather conditions, birthing difficulties requiring veterinarian assistance, and staffing and resource deficiencies, moving into farrowing or birthing facilities several days prior to due date.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in preparing animals for parturition requires evidence of the ability to provide nutritional and environmental requirements adequate to maintain the health and welfare of pregnant animals through to birthing. It involves the ability to assess animals' health status and provide feed and feed supplements accordingly, handle animals, maintain a secure and safe environment, carry out animal husbandry procedures including preventative health treatments, recognise and report abnormalities and maintain records. Evidence must also be demonstrated in the safe use of firearms, and the employment of positive environmental and safe workplace practices associated with animal production. The skills and knowledge required must be **transferable** to another rural workplace. For example, this may include different breeds, animals, enterprises and environmental conditions.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (1) be applied?
 - Information and ideas with regard to animal gestation, nutrition and preventative health treatments may be discussed with feed suppliers, veterinarians and the supervisor.
- How can information be collected, analysed and organised (2)?
 - Information with regard to the implementation of the feeding plan may be observed and monitored for analysis and organised by records and reports.
- How are activities planned and organised (2)?
 - Activities involving repairs and maintenance to the animal's environment may be planned and coordinated around animal feeding schedules or sequenced as required
- How can team work (2) be applied?
 - Team work may be applied in methods and procedures to handle animals to administer preventative health treatments.
- How can the use of mathematical ideas and techniques (1) be applied?
 - Mathematics may be applied in the calculation and measurement of feed and feed supplements, and the measurement of preventative health treatments.
Estimating due date of birth from the date of joining.
- How can problem-solving skills (1) be applied?
 - Contingencies for adverse weather conditions may be planned and prepared to minimise disruption to feeding schedules.
- How can the use of technology (1) be applied?
 - To access information, assist in the development of a feeding plan, record information, communicate and inform on the feeding process, and monitor substantial weather changes.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3122A

Unit Descriptor

Prepare livestock for shearing

This competency standard covers the functions required to sort and prepare livestock for shearing.

It requires the application of skills and knowledge to muster and move sheep, identify livestock for culling, and carry out crutching operations in readiness for shearing. Competency requires an awareness of legislative requirements with regard to shearing practices. The work in this standard requires the application of some judgement and discretion, and would be carried out with minimal supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Sort livestock for shearing	1.1 Livestock are located, identified and confirmed according to enterprise shearing plan . 1.2 Livestock are safely mustered and moved to shearing facilities, sorted and yarded according to shearing plan and enterprise requirements . 1.3 Livestock with pigmented fleece are identified and culled for separate shearing operations. 1.4 Potential and existing hazards are identified and controlled according to OHS and enterprise requirements.
2. Prepare livestock for shearing	2.1 Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements. 2.2 Shearing, cleaning and drenching equipment is checked for correct operation according to manufacturers specifications. 2.3 Livestock are crutched, cleaned or drenched, as required, according to industry and enterprise requirements. 2.4 Contaminated and stained fleece is removed and disposed of according to enterprise requirements.
3. Monitor livestock	3.1 Feed and water supplies for livestock are provided and maintained according to enterprise requirements 3.2 Suitable shelter for livestock is provided and maintained according to animal welfare and enterprise requirements. 3.3 Livestock condition and health status is monitored for evidence of sickness, and recorded or reported according to enterprise requirements. 3.4 Environmental implications associated with shearing activities are monitored and controlled.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to organising livestock for yarding and crutching may be discussed with the manager and work team.	1
Collecting analysing and organising information	Information with regard to shearing requirements may be identified in the shearing plan, implemented accordingly, and outcomes recorded for analysis.	1
Planning and organising activities	Crutching or drenching of livestock is planned and implemented prior to shearing operations.	2
Working with others and in teams	Team work may be applied in the efficient preparation of livestock to prevent disruption to shearing schedules.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calculation of livestock and respective feed and water requirements. It may also be used to calculate and measure drenching applications.	1
Solving problems	Problems of adverse weather conditions may be resolved by the provision of suitable shelter for livestock.	1
Using technology	Technology may be used to communicate, and calculate measurements and capacities.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What types of livestock may be prepared for shearing?

Livestock may include sheep, goats and alpacas.

What information may be included in a shearing plan?	Information may include the location and identity of livestock, mustering and movement instructions and procedures, the number of livestock to be shorn, grouping of livestock to be yarded, culling instructions, livestock preparation procedures, equipment and resource requirements, contingency plan, enterprise instructions, and reporting requirements. A contingency plan may be implemented in the event of adverse weather conditions, which may require shedding or providing a sheltered environment for livestock.
What determinations may be involved in sorting livestock prior to shearing?	Sorting cashmere goats pre-shearing may involve either drafting for colour (and limiting the number of lines to be classed), or the separation of all the apparently white animals to prevent contamination by pigmented fibre of a pure white line of cashmere. Sheep may be drafted according to age, sex, breed or line, or previous feed.
Why are livestock yarded prior to shearing?	Livestock are yarded to allow emptying out, which requires about 12 hours without access to feed.
What enterprise requirements may apply to this standard?	SOP, industry standards, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use), and reporting requirements.
What potential and existing hazards may be associated with shearing activities?	Hazards may include livestock movement and handling, damaged yards, obstacles and uneven ground. It may also include exposure of handlers to hazardous substances such as pesticides used for ectoparasite control.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • operation of crutching and shearing equipment • hazard and risk control • handling livestock including zoonoses control • manual handling, including lifting and carrying • fleece handling and harvesting • protection from electrical hazards, hazardous noise and organic and other dusts • outdoor work including protection from solar radiation • appropriate use of personal protective equipment.
What personal protective equipment may be relevant to this standard?	Boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

How might stained fleece be identified?

This may include fleece or fibres, which have been stained by faeces or urine.

What suitable shelter might be provided for livestock?

Sufficient protection from adverse weather conditions may be provided by the existence of large rocks or clumps of trees. In the absence of natural resources, shelter may be provided by the construction of artificial shelters (corrugated iron, large bales of hay to form a wall) to prevent weather damage, sweating or smothering of livestock.

What conditions may be identified in determining the health status of livestock?

Health status may include evidence of pregnancy, footrot and various communicable diseases to prevent the spread of sickness, disease or death at shearing.

What environmental implications may be associated with shearing activities?

Negative environmental impacts may result from high density livestock activity, particularly in holding or confined areas, causing increased run-off flows, loss of ground cover, soil disturbance, pugging, dust problems, weed seeds in animal manure, and contamination of ground and surface water supplies.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in preparing livestock for shearing requires evidence of the ability to care for and handle livestock in preparation for shearing operations. It also requires the ability to identify pigmented fleece, carry out drenching procedures, dispose of contaminated fleece, maintain the nutritional and environmental requirements of livestock, and monitor livestock health and condition for abnormalities or sickness. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices.

The skills and knowledge required to prepare livestock for shearing must be transferable to a different work environment. For example, this may include different breeds, enterprises, wool types and conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types and purposes of shearing boards, yards and catching pens
- components and functions of shearing, cleaning and drenching equipment
- handling, mustering and movement techniques
- livestock breeds, nutritional and hygiene requirements
- livestock diseases and treatments
- quality management systems for fleece/fibre
- fleece contaminants and types of pigmentation faults
- environmental codes of practice with regard to livestock production
- OHS and animal welfare legislative requirements
- National codes of practice for the Shearing Industry (Health, Safety and Welfare standards).

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- select equipment appropriate to crutching and shearing tasks
- organise crutching and shearing operations
- detect and anticipate disease or nutritional disorders
- critically observe and monitor livestock health and condition
- organise feed and water supplies
- avoid and remove contamination of fleece
- handle livestock with due care
- demonstrate safe and environmentally responsible workplace practices
- read and interpret MSDS, manufacturers specifications and shearing plan requirements
- communicate verbally with work team and manager, comprehend and apply task instructions
- calculate livestock numbers, and measure dosage and feed requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3123A

Unit Descriptor

Pregnancy test pigs

This competency standard covers the functions involved in manually testing pigs for pregnancy. Competency in this standard includes the assessment of several manually determined key indicators of pregnancy in pigs. Pregnancy testing may be used as a diagnostic tool in a breeding program or where there is a need to accurately establish pregnancy, or absence of pregnancy, for other purposes as required by the enterprise.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for pregnancy diagnosis procedures	1.1 Pregnancy testing preparations including the preparation of relevant documentation are completed according to organisation requirements and procedures . 1.2 Pigs to be tested are identified according to the breeding or management program requirements. 1.3 Physical and human resources for pregnancy testing are assembled according to organisation policy. 1.4 Individual pigs are isolated for veterinary treatment or examination. 1.5 All handling and testing of pigs is undertaken with strict adherence to the animal welfare code.
2. Carry out manual pregnancy diagnosis procedures	2.1 Individual pigs are handled in manner to minimise stress while testing and individual breeding records are checked. 2.2 Personal protective equipment is fitted according to organisation policy. 2.3 OHS hazards are continually identified, risks assessed and suitable controls implemented. 2.4 Examination is carried out with minimal stress to the pig while key indicators are checked for pregnancy diagnosis. 2.5 Strict hygiene procedures are implemented between individual pigs in line with organisation and industry requirements. 2.6 Records are kept and outcomes reported according to organisation requirements. 2.7 Other indicators of pig health are observed and noted for input to herd health management .
3. Carry out post pregnancy testing clean up procedures	3.1 Pigs diagnosed as pregnant or not pregnant are accurately identified according to the requirements of the organisation. 3.2 All pigs are consigned to their destination or returned to paddocks/pens in line with organisation needs. 3.3 Debris and veterinary medicine containers from pregnancy testing operations are disposed of in full consideration of environmental considerations and controls. 3.4 Regular monitoring of pigs post testing is carried out to ensure that no evidence of physical damage or injury is evident.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In communicating with veterinarians, fellow employees, and supervisor.	2
Collecting analysing and organising information	In recognising key indicators for pregnancy diagnosis from manually collected evidence and other information.	2
Planning and organising activities	In organising pregnancy/non-pregnancy diagnosis operations and procedures.	1
Working with others and in teams	When interacting and working safely with producers, veterinarians and other staff.	1
Using mathematical ideas and techniques	When calculating due farrowing date as well as generating reports and information.	1
Solving problems	When dealing with lack of evidence and difficult conditions.	1
Using technology	In calculating and communicating results.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What organisation work procedures may apply to this standard?

Work procedures may include supervisors oral or written instructions, pig production program, enterprise and industry quality assurance requirements, organisation standard operating procedures, waste disposal, recycling and reuse guidelines, and OHS procedures.

What personal protective equipment may be relevant to this standard?

This may include boots, hats/hard hat, overalls, gloves, protective eyewear, hearing protections, respirator or face mask, and sun protection (sun hat, sun screen).

What actions could be taken to eliminate or minimise the OHS risk?

All working routines for pigs must be carried out in line with the provisions of the Workplace Health and Safety Acts and relevant pig Codes of Welfare

- relevant OHS hazards identification, risk assessment and risk control measures
- safe operating procedures
- safe manual handling systems and procedures
- selection, use and maintenance of relevant personal protective equipment.

What are the key indicators of pregnancy/non-pregnancy?

Key indicators of pregnancy include:

- a return to oestrus indicated by physiological and behavioural signs is a key indicator of non-pregnancy
- presence of foetal heartbeat, foetal fluids, a developed foetus.

What information might be recorded and reported?

Dates, times and periods of observations, chemicals and other substances used, including quantities and methods, and readings from temperature gauges.

What input to herd health management could be derived from pregnancy testing?

Pregnancy diagnosis may include the identification of unsuccessful matings, for herd nutritional planning and herd management planning.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in testing pigs for pregnancy requires evidence that pregnancy is detected through several manually determined key indicators.

The skills and knowledge required to identify pregnancy in pigs must be transferable to a different work environment, for example, across a range of pig breeds and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the reproductive physiology of the pig
- the stages of parturition in pigs
- pig reproductive systems
- pig embryological development
- relevant zoonoses
- the use of pregnancy/non-pregnancy diagnostic tools and equipment
- recording and reporting systems used in conjunction with pregnancy diagnosis and pig breeding programs.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- methods of handling pigs that minimise the likelihood of stress
- report clearly, accurately and in a timely fashion on the health and welfare of the pigs
- accept advice and instruction
- work effectively and safely to accurately carry out manual pregnancy diagnosis with safety and nil damage to pigs or personnel.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3124B**Unit Descriptor****Rear newborn and young livestock**

This unit of competency specifies the outcomes required to rear newborn and young animals. It involves the application of knowledge and skills to prepare facilities, feed newborn and young animals, observe behaviour and health, and identify the needs of newborn and young animals. Competency also requires the ability to check on progress, to provide treatment as required and to wean and handle newborn and young animals, and record relevant data. This work is likely to be carried out with minimal supervision within enterprise guidelines.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare for care of newborn and young.	1.1 Facilities, equipment and supplies needed to provide care are identified selected and prepared. 1.2 Needs of newborn and young animals are assessed and prepared. 1.3 Feeding routines are implemented and observed. 1.4 Hygiene, health and environmental requirements are identified and maintained according to enterprise and legislative requirements. 1.5 Newborn and young are appropriately identified and humanely handled as required according to enterprise requirements and industry standards.
2. Provide care for newborn and young.	2.1 Feed and feed supplements are provided as required and according to enterprise and nutritional requirements . 2.2 Relationship between mother and young is monitored where appropriate and strategies are implemented to address any problems. 2.3 Feeding, water and shelter areas are maintained and monitored for correct operation, cleanliness and hygiene. 2.4 Colostrum is collected, stored and administered as required. 2.5 Routine health and feeding problems are treated promptly.
3. Monitor health of newborn and young.	3.1 Newborn and young are monitored against benchmarks for growth, health and development. 3.2 Appropriate action is taken for sick, weak, orphaned and injured, newborn and young. 3.3 Assistance is sought for more complex health and feeding problems. 3.4 Newborn and young requiring routine husbandry and health procedures are separated, treated and returned. 3.5 Treatments and checks are carried out according to hygiene, enterprise, industry and legislative requirements.

4. Meet ongoing requirements.
 - 4.1 Young animals ready for weaning are identified and weaned according to enterprise procedures and ***weaning programs***.
 - 4.2 ***Feeding requirements*** are identified and met.
 - 4.3 Animals are ***handled*** regularly as required.
 - 4.4 ***Records*** are kept and updated to meet enterprise and legislative requirements.
 - 4.5 All work is conducted safely and according to enterprise requirements, ***OHS, industry and animal welfare regulations***.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- common deformities
- enterprise and industry policies and codes of practice with regard to rearing of newborn and young animals and recording and reporting requirements
- feeding systems
- husbandry procedures
- hygiene and cleanliness requirements
- infection controls and treatment programs (working knowledge)
- newborn and young development and growth
- newborn and young animals feed, shelter and environmental requirements
- relevant legislative health and OHS requirements especially as they relate to safe animal handling techniques, feeding, animal treatments, and rearing and caring for newborn and young animals
- significance of colostrum to livestock
- shelter requirements
- weaning strategies.

Required knowledge:

- calculate feed and dose rates
- collect samples
- communicate with other personnel
- identify abnormal conditions and report or react promptly
- identify the young and their parent
- provide support as needed to veterinarians attending to sick newborn and young animals
- recognise signs of stress or ill health in newborn and young animals
- safely and humanely handle and care for newborn and young animals
- weigh and assess condition of newborn and young animals
- work within animal welfare legislative requirements and enterprise and industry guidelines
- use feed, shelter and ventilation equipment.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

What ***facilities, equipment and supplies*** might be needed?

Facilities: shelter of correct size and requirements to suit type of animals, appropriate ventilation and temperature controls (blinds, shutters, registers, poly socks), provision of a clean, dry, warm and draught free environment, suitable shedding, pens, slatted wire/flooring, deep litter, washable troughs, teat feeding equipment, water supply for washing up and drinking, hoppers or troughs for pellets and grain, hay feeders, vermin and damp proof feed storage facilities, air quality, sick bay, adequate exposure to sunshine for calf pens, and drainage systems.

Equipment: feed and water buckets, bails, teats, troughs, drums, racks or rings for roughage, troughs or bins for concentrates, milk transporting systems, water troughs or drinkers. Natural or additional shelters in paddock. Hygiene and cleaning materials, house rearing facilities, paddock rearing facilities, weaning equipment and facilities, weighing equipment/scales and facilities, adequate effluent treatment and disposal facilities, cleaning equipment. Halters, leads, bridles, bits and horse rugs.

Veterinary and related supplies: such as electrolyte solutions, anti-bloat, anti-scour, vaccine, vitamins/ minerals, prescribed medications, antibiotics (for use with veterinary supervision), laxatives, nutrient drenches, tube feeding equipment, syringes, needles and spirit, drenching equipment, tattoo equipment, eartags, temporary or permanent collars, stored/ artificial colostrum.

Feed supplies: milk replacer, calf pellets, feed concentrates and additives, and feed roughage.

What ***needs*** might newborn and young animals have?

Fresh, clean and palatable feed and water. Suitable shelter, warmth, cleanliness, adequate ventilation, adequate nutrition, freedom from stress, disease prevention management, protection from hazards and predators.

For pigs and poultry: temperature control and air quality.

What ***newborn and young animals*** are covered?

Newborn and young animals covered by this unit of competency include lambs, calves, kids, pigs (suckers, weaners) poultry (birds), foals and weanlings and crias.

What might need to be considered when implementing and observing **feeding routines**?

- monitoring feeding times and feed rates when restricted feeding in place
- identifying and reporting malfunctions
- observation of suckling and feeding, ensuring that calves, foals, piglets, lambs and crias get an early drink of colostrum, assisting with suckling/feeding as necessary
- provision of milk, introduction and maintenance of solid feed (grain, pellets, roughage), feed supplements, checking for abnormalities in feeding and identifying poor or slow feeders
- bottle feeding, foster feeding or donor dams
- supplementary feeding.

What **hygiene, health and environmental requirements** might exist?

- disinfecting shelters
- ensuring adequate ventilation and warmth
- adequate effluent treatment and disposal facilities
- clean water
- clean feed troughs and areas
- clean and hygienic facilities and equipment are maintained
- disposal of carcasses.
- **Additional for poultry:** lighting programs and cleaning of light globes and identifying malfunctions.

How might newborn and young animals be **appropriately identified**?

Use of eartags, notching, markings, sire and dam identification.

Why might newborn and young animals be **handled**?

Young animals may need to be caught and restrained for routine health and husbandry procedures, such as tail docking, teeth clipping, iron injection, vaccination, hoof trimming, worming, weighing, etc. Young horses may also need to be accustomed to accepting leads, halters and other restraints.

Which **enterprise requirements** might be relevant?

Standard operating procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets, work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and routine maintenance plans.

What **nutritional requirements** might be relevant?

Those that relate to the needs of new born and young animals and may be identified from authoritative and reliable sources such as veterinarians, books, supervisors, other farmers, government departments, feed suppliers and breed societies.

What **appropriate strategies** might need to be implemented?

Teaching newborn and young to drink/feed, ensuring access to colostrum where necessary, provision of alternative feed/milk source, identifying orphans and organising bottle-feeding and/or a foster mother.

For what reasons might feed watering and shelter need to be **maintained and monitored**?

Machinery or equipment breakdown or malfunction and repairs to shelter/housing/pens/yards.

What **routine health and feeding problems** might occur?

Scours (of differing varieties), pneumonia and other respiratory diseases, milk or concentrates bloat, acidosis, navel-ill, joint-ill, noticing changes in behaviour and visual changes indicating stress, wounds and injuries, abnormalities and deformities, neonatal maladjustment syndrome. Checking for soundness in limbs, teeth and hooves, identifying small and less vigorous young for separation and specialist feeding routines or re-assignment, isolation of sick, injured or unhealthy young in sick bay.

What **benchmarks** might newborn and young animals be monitored against?

- observing and assessing performance of newborn and young animals
- development of reflexes and sensory awareness
- where appropriate ensuring colostrum intake
- passing of meconium and urination
- ensuring adequate supply of milk from mother
- determining growth rates and condition scoring to check whether expected height and weight benchmarks for age are being met.

For poultry: checking for injured, malformed or non-productive birds.

What type of **appropriate action** might need to be taken?

Separating out poor feeders and sick or injured stock for special treatment, humanely culling by selecting stock that are injured, malformed or not responding to treatment.

What type of appropriate **assistance** might need to be taken?

More experienced staff, supervisors, veterinarians.

What routine **husbandry and health procedures** might be needed?

Disbudding, tattooing, infection and parasite control, vaccination, hoof care, freeze/hot branding, conducting foal or cria imprinting and fitting of headstalls.

What **treatments and checks** might need to be carried out?

Checks: soundness checks - injury abnormalities and deformities, neonatal maladjustment syndrome. Observing and assessing performance and feeding patterns, observing changes in behaviour and visual changes indicating stress.

Treatments: vaccination by a variety of methods. Administration of antibiotic injections under veterinary supervision, other prescribed medication nutrient drenches, prescribed medication in water and feed, and monitoring compliance with established withholding periods.

Additional checks for foals: the checking of foals is paramount for their health and wellbeing particularly the first 48 hours. Checking at birth for obvious deformities and abnormalities, sex, colour, dam and sire, umbilical chord stump, respiration, and clearance of afterbirth, temperature capillary refill, and pulse. Checking limbs, dentition and hooves (trimmed every 4-5 weeks) condition. Checking for straining or scouring, limb problems/deformities, lethargy, exercise frequency, umbilical hernia, nasal discharge, mismothering, restlessness, body exudates, development of reflexes and sensory awareness, and abnormal respiration. Checks for unusual behaviour such as: weaving, wind-sucking, abnormal aggression, and changes to respiration rate. Identification of mare/foal by brands, tagging, marked halters, microchipping, colour, and markings. Checking of vital signs.

Additional treatments for foals: post birth antibiotics, anti-tetanus injections, and laxatives. Providing assistance with intensive care, maintenance of fluid therapy, exercise and regular movement, maintaining body heat, and dressing wounds and injuries.

Additional checks for poultry: floor walks are critical in detecting equipment, environmental and health changes as they happen and are a crucial preventative measure. Checks may include assessing effects of vaccination, collecting blood samples, faecal samples and tissue samples, floor litter and inspecting nest litter to check on disease status and eggs.

Treatments for piglets: teeth clipping, tail docking, castration and iron injections for piglets.

What are some of the key considerations in a **weaning program**?

- humane handling
- grouping of young animals based on body weight and sex
- weaning off milk according to any rearing programs
- introduction of young to pasture and supplementary feed
- where needed young are gradually weaned (e.g. horse) and allowed limited or reduced suckling opportunities using industry recognised and approved methods.
- **For pigs:** provision of a clean, warm and draught free environment.

What **feeding requirements** might there be?

High quality pasture, roughage and/or concentrate and supplementary feeding are maintained as necessary.

Why might **handling** occur?

To get animals used to human contact to facilitate future treatment and care.

For poultry: to sex and count the number of birds.

For horses: handling may include identification and mustering of mares and foals and separation, frequent catching and restraining, teaching to tie up and lead, teaching to load, teaching to pick up feet, exercise (behind treadmill/joggers, lunging, regular grooming and being prepared for future sales weanling and yearling sales.

What **records** might need to be kept?

Weaning date, weights, feed quantities, treatments and vaccinations, abnormalities and injuries.

What **enterprise and industry standards** might need to be considered?

Quality assurance and industry standards and Codes of Best Practice for rearing newborn and young animals.

What **OHS** requirements may be applicable?

Safe animal handling systems and procedures including zoonoses (including Q Fever), safe manual handling systems and procedures, application and storage of hazardous substances (drenches, vaccines), safe systems and procedures for outdoor work including protection from solar radiation, and the appropriate selection, use and maintenance of personal protective equipment.

What **regulatory requirements** might need to be considered?

Animal welfare legislation, withholding period and quarantine requirements, the welfare and husbandry of sheep or goats, and codes of practice for welfare of animals and specifications concerning animal health tests.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in rearing newborn and young animals requires evidence of the ability to prepare and maintain facilities, equipment and supplies, feed and monitor health and condition of newborn and young animals according to enterprise, animal nutrition and animal welfare requirements. In addition it requires an ability to check and treat newborn and young animals as required and to wean and handle newborn and young animals.

The skills and knowledge required to rear newborn and young animals must be **transferable** to another rural workplace. For example, if competence is evident in rearing newborn and young sheep it should also be evident for either cattle, horses, pigs or poultry in both large and small enterprise operations.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (1) be applied?
 - To discuss concerns requirements and progress with property owner/supervisor and staff.
- How can information be collected, analysed and organised (2)?
 - Information on feed regimes, nutrition requirements, health concerns may be collected and organised for analysis and organised by records and reports.
- How are activities planned and organised (2)?
 - The coordination of regular feeding routines and hygiene, and cleaning routines and animal monitoring.
- How can team work (2) be applied?
 - Team-work may be applied to ensure optimum nutritional requirements and growth/health.
- How can the use of mathematical ideas and techniques (1) be applied?
 - Mathematics may be applied to calculate volumes and schedules.
- How can problem-solving skills (1) be applied?
 - In the identification of infection, health and feeding and handling difficulties.
- How can the use of technology (1) be applied?
 - To monitor health, growth and feeding patterns and to record data.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3126A**Remove and facilitate reuse of effluent and manure from an intensive production system****Unit Descriptor**

This competency standard covers the process of operating and maintaining the equipment used for effluent removal from the production shed, and monitoring its efficiency. It includes cleaning the system and maintaining clear and accurate records about the operation and monitoring of the system. When the requirements of this standard are applied effectively, the production sheds and surrounding environment are maintained to industry standards.

This standard is applicable to the production of both pigs and poultry in all production systems and may have application in other contexts.

Disposing of the effluent from an intensive production system is likely to be under limited supervision from others, with checking only related to overall progress. It is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services and actions to achieve outcomes within time and budgetary constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to work with effluent disposal equipment	1.1 Work to be undertaken is interpreted from work program where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the maintenance activities to ensure continued smooth operation of the production process. 1.3 OHS hazards are identified, risk assessed and suitable controls implemented. 1.4 Suitable personal protective equipment is selected, used and maintained. 1.5 Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary.
2. Maintain and operate effluent storage and disposal system	2.1 Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment. 2.2 Effluent removal and disposal equipment is correctly serviced and maintained. 2.3 Effluent disposal systems are used according to system design in compliance with approval granted by local government and State environment protection authority. 2.4 When liquid effluent storages are used, recognised techniques for irrigation are carried out according to establishment practice. 2.5 In-shed effluent pits are flushed and drained as required. 2.6 When effluent is composted, turning is done in accordance with establishment practice, State environment protection authority recommendations, and OHS procedures.

3. Monitor effluent disposal system	3.1 Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment. 3.2 Flow rates, pit levels, compost temperatures and equipment are regularly checked to maintain effective operation of the system. 3.3 Cleaning procedures and hygiene practice are carried out according to established practice. 3.4 Monitoring reflects an understanding of the environmental duty of care .
4. Conduct hygiene and administration activities	4.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations. 4.2 Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturers specifications, organisational procedures and regulations. 4.3 All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately. 4.4 All required records and documentation are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	With licensing authorities, farm management and other employees.	2
Collecting analysing and organising information	To ensure environmentally responsible effluent handling.	2
Planning and organising activities	In undertaking the preparation activities for maintaining and monitoring the system.	2
Working with others and in teams	To safely remove effluent from the unit and manage disposal.	2
Using mathematical ideas and techniques	To calculate N.P.K loadings for disposal.	2
Solving problems	In ensuring that any hazards that present are dealt with effectively and promptly.	2
Using technology	To maximise long-term environmental sustainability of the system.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- handling livestock including zoonoses control
- operating equipment
- hazard and risk control
- manual handling
- safe operation and maintenance of machinery and equipment, including hydraulics and guarding of exposed moving parts, and including pumps, impellers and aeration equipment
- handling, transport and storage of hazardous substances, including flammable and toxic gases which may accumulate in pipes and sumps
- outdoor work including protection from solar radiation, dust and noise
- the appropriate use and maintenance of personal protective equipment
- working in or around confined spaces.

What personal protective equipment may be relevant to this standard?

This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What types of effluent disposal systems may be used?

Disposal systems will be machine spreading, spray or flood irrigation, effluent ponds, and collection for manufacture of commercial fertilisers and fuels.

What is meant by an environmental duty of care?

Environmental duty of care may include an awareness of legislative and regulative requirements, codes of practice, established guidelines, organisations environmental plan including any State based environmental and local government regulations for effluent storage and disposal.

What relevant information might be recorded and reported, and what form might it take?

Dates, times and periods of operation and maintenance, chemicals and other substances used including quantities and methods, and readings from temperature and flow-rate gauges. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in disposing of effluent from intensive production systems requires evidence that effluent is disposed of cleanly and efficiently resulting in minimal impacts on the surrounding environment.

The skills and knowledge required to dispose of effluent from intensive production systems must be transferable to a different work environment. For example, across the range of shed types and disposal systems in place in the organisation.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- effluent handling systems
- factors affecting effluent degradation
- environmental codes of practice, and local and State government regulations
- environmental controls and codes of practice applicable to the enterprise
- the organisations livestock production and management plans - sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors
- relevant OHS legislation, regulations and codes of practice.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- maintain production shed environment and system through an efficient effluent handling program
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and MSDS
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- maintain and monitor gauges and instruments that control the effluent disposal system
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3127A**Unit Descriptor****Treat rectal prolapse in pigs**

This competency standard covers the process of treating rectal prolapse in pigs. It requires the ability to respond to signs of rectal prolapse, treat rectal prolapse and report on rectal prolapse. Treating rectal prolapse in pigs requires knowledge of pig health and physiology; symptoms of prolapse and associated problems, treatments for rectal prolapse, enterprise standard operating procedures in respect to rectal prolapse, and animal welfare codes of practices.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Respond to signs of rectal prolapse	1.1 Symptoms of rectal prolapse are identified. 1.2 Pig is removed from pen. 1.3 Treatment required to repair prolapse is determined based on severity of injury and enterprise standard operating procedures. 1.4 Outbreaks of rectal prolapse in a herd are notified to management according to enterprise standard operating procedures.
2. Treat rectal prolapse	2.1 Minor prolapses are replaced and retained by a purse string or mattress suture. 2.2 Large prolapses are reduced by gentle hand pressure before suturing. 2.3 Badly torn prolapses are replaced and pig is moved to hospital pen. 2.4 Rectal strictures are recognised and treated according to enterprise standard operating procedures. 2.5 Antibiotics are administered to pigs with rectal prolapse where required by enterprise standard operating procedures.
3. Report on rectal prolapse	3.1 Incidents and treatments are reported to supervisor according to enterprise standard operating procedures. 3.2 Possible mechanisms for prolapse are reported to supervisor. 3.3 Modifications to pig management are undertaken to reduce incidence of rectal prolapse.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through reporting on incidents and treatments of prolapse.	2
Collecting analysing and organising information	Through observation and reporting on incidents.	2
Planning and organising activities	By observing symptoms and responding according to enterprise standard operating procedures.	2
Working with others and in teams	Through working with others in treating prolapse.	2
Using mathematical ideas and techniques	N/A	-
Solving problems	Through identifying symptoms of prolapse and determining treatment.	2
Using technology	Through use of computers and communication systems for recording data.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What symptoms may apply to rectal prolapse?

For weaners and growers, symptoms may include protruding swollen prolapse, blood on pigs in a pen, swollen abdomen (due to rectal structure), pale pigs due to haemorrhage and constipated pigs.

For sows, symptoms may include protrusion of red coloured mucosa of the rectum from the anal sphincter, paleness due to haemorrhage and blood in faeces.

What information may be provided in a report?

Age of pig, comments and observations, house and pen, days in the house, , number of pigs per pen, diet fed, number of rectal strictures, number of prolapses sutured, outcome of treatment and state of prolapse.

What mechanisms for prolapse may be relevant to this competency standard?

Age of pig, comments and observations, house and pen, days in the house, , number of pigs per pen, diet fed, number of rectal strictures, number of prolapses sutured, outcome of treatment and state of prolapse.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in treating rectal prolapse in pigs requires evidence that rectal prolapse has been correctly identified, treatment has been successfully implemented and reports have been completed according to enterprise standard operating procedures. The skills and knowledge required to treat rectal prolapse in pigs must be transferable to a range of work environments and contexts. For example, this could include different enterprises, classes of pig, and growing environments.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- pig health and physiology
- symptoms of prolapse and associated problems
- treatments for rectal prolapse
- enterprise standard operating procedures in respect to rectal prolapse
- animal welfare codes of practices.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- respond to signs of rectal prolapse
- treat rectal prolapse
- report on rectal prolapse.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3128A

Unit Descriptor

Collect, store and administer colostrum

This competency standard covers the process of collecting colostrum from lactating animals and/or obtaining and preparing artificial colostrum. It also covers storing colostrum for future use and administering it to newborn animals requiring assistance with feeding.

Collecting, storing and administering colostrum is likely to be carried out under routine supervision with intermittent checking. Responsibility for some roles and co-ordination within a team may be required. Feeding operations are usually carried out within established routines, methods and procedures. Competency at this level requires the application of knowledge and skills to a range of animal husbandry tasks and roles.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Obtain colostrum	1.1 Required equipment is obtained, checked and sterilised. 1.2 Suitable donor animals are identified and colostrum is collected . 1.3 Artificial colostrum is obtained from stocks held where required. 1.4 Suitable personal protective equipment (PPE) is selected, used and maintained.
2. Administer colostrum to newborn animals	2.1 Identify newborn animals requiring supplementary colostrum. 2.2 Obtain and prepare feeding equipment . 2.3 Frozen colostrum is thawed at room temperature. 2.4 Thawed colostrum is warmed to body temperature. 2.5 Warmed colostrum is administered to newborn animals according to individual animal requirements and enterprise procedures. 2.6 Newborn animals are checked regularly after administration of colostrum and repeat colostrum feeds are given as required.
3. Store colostrum	3.1 Colostrum is filtered according to enterprise procedures and placed in appropriate container 3.2 Surplus colostrum is frozen for future use and container is labelled with details of donor animal and date of collection.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communicating with supervisor regarding daily routines and collection of colostrum.	1
Collecting analysing and organising information	Obtaining information about animals that have recently birthed and selecting appropriate animals for colostrum collection.	1
Planning and organising activities	In organising daily work routines for observing newborn animals and checking on those animals requiring supplementary feeds.	1
Working with others and in teams	Working with teams and others in monitoring the health and welfare of newborn animals.	-
Using mathematical ideas and techniques	Calculating quantities of colostrum to be administered and quantities available.	1
Solving problems	Identifying newborn animals requiring assistance, including those requiring supplementary feeds of colostrum.	2
Using technology	Using technology in operating feeding equipment, and in storing and thawing colostrum or preparing artificial colostrum	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

Which animals does this competency standard cover?	Animals covered by this standard may include cattle, horses, goats and pigs.
How is colostrum collected from donor animals?	Teats or udders of donor animal are washed. Colostrum is expressed gently and without causing distress to the donor animal in accordance with animal welfare principles. Colostrum is usually collected from cows by milking machine.
What feeding equipment may be required?	Feeding equipment may include bottles, teats, tubing and buckets.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in collecting, storing and administering colostrum requires evidence that colostrum is obtained and prepared according to enterprise standards. Collection and storing activities must maintain the quality of the colostrum.

The skills and knowledge required to collect, store and administer colostrum must be transferable to a different work environment. For example, working with animals of different species.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the time periods after parturition in which colostrum can be collected from donor animals
- the time periods during which newborn animals must receive feeds of colostrum
- the nutrition requirements of newborn animals and the reasons for feeding colostrum
- the behavioural characteristics of animals that have just given birth.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- filter colostrum
- prepare artificial colostrum
- handle animals after parturition
- handle and feed new born animals
- observe health and condition of newborn animals.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3129A**Unit Descriptor****Shear sheep to professional level**

This competency standard covers the selection, handling and shearing of sheep to professional level of 100 - 120 or more sheep per day.

It requires the application of skills and knowledge to identify problem sheep and rectify shearing complications. Competency requires an awareness of enterprise and legislative requirements with regard to shearing practices and shearing shed procedures.

NB: Chemicals must only be applied by qualified persons outside the workplace.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Recognise and correct faults in shearing technique	1.1 Analyse shearing technique. 1.2 Recognise and correct faults in sheep position, footwork and free hand use. 1.3 Recognise and correct faults in the number of blows and their placement. 1.4 Improve co-ordination of footwork, free hand use, sheep control and blow placement.
2. Apply techniques to increase shearing speed and accuracy	2.1 Increase speed at which the handpiece is pushed forward and returned between blow placements. 2.2 Improve the power, direction and manoeuvrability applied at the increased speed. 2.3 Improve rhythm at the increased speed. 2.4 Maintain calm temperate for 8-hour working day. 2.5 Recognise the importance of stamina and fitness in improvement of output consistency.
3. Shear required number of sheep in an eight hour day working day to quality standard of the industry for both sheep and wool	3.1 Demonstrate safety procedures during shearing in relation to people and sheep. 3.2 Avoid excessive wool contamination and damage to the wool. 3.3 Shear 120 adult merino sheep or equivalent using identified method and positions in line with industry standards in a normal eight-hour working day. 3.4 Use correct movement of feet and hands, and maintain correct positioning to the downtube. 3.5 Release sheep at increased speed in line with industry and enterprise requirements. 3.6 Comply with OHS, animals welfare and industry and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to shearing procedures and problems associated with contaminated fleece or problem sheep, may be discussed with colleagues and reported to the classer and/or overseer /supervisor.	2
Collecting analysing and organising information	Shearing outcomes including information with regard to shorn sheep, problem sheep and contaminated wool may be detailed and tallied, and organised by records and reports.	1
Planning and organising activities	Shearing activities may be planned and co-ordinated with time schedules and numbers of sheep or sequenced as required.	1
Working with others and in teams	Team work may be applied in treating problem sheep, or in arranging for the collection of shorn fleece.	2
Using mathematical ideas and techniques	Mathematics may be applied in the tallying of shorn sheep, mob breaks or cut-outs.	2
Solving problems	Contingencies for dealing with problem sheep and contaminated wool may be planned and prepared to minimise disruption to shearing schedules. Alternative planning may also be needed if complications occur when catching or shearing sheep.	2
Using technology	To communicate, record and calculate shearing outcomes and tallies, in using handpieces and shearing equipment, and advances in manufacturing machinery and equipment.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What sheep might be subject to the shearing operations?

All ages and genders of sheep, including rams, ewes, wethers, lambs, hoggets and stags

What processes might be involved in moving sheep?

Sheep may be caught and moved from the catching pen to the board using safe handling techniques.

What organisational, industry and animal welfare standards might apply to sheep shearing?

Organisation may include: Standard Operating Procedures, industry standards, production schedules, work notes, work plans, manufacturers specifications, supervisors instructions, and workplace policies and procedures (including recycling, environmental and land management).

Industry and animal welfare standards/requirements might include: National codes of practice for the Shearing Industry (Health, Safety and Welfare standards), Environmental Protection Act, and Animal Welfare Act.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- safe operation and maintenance of machinery and equipment including guarding of exposed moving parts
- the operation and maintenance of hazard-free facilities and equipment
- the maintenance of accommodation facilities
- handling livestock
- safe manual handling, including lifting and carrying
- safe fleece/wool harvesting
- the protection from electrical hazards, hazardous noise and organic and other dusts
- the health and safety of shearing personnel
- the appropriate use of personal protective clothing and equipment
- animal welfare considerations including disease control.

What adverse shearing conditions may be applicable to this standard?

These may be extreme temperatures, wet or contaminated wool.

What range of shearing methods, positions and procedures may be recommended by industry?

This may include detailed procedures for removal of wool from the belly and crutch, first hind leg, wig, first side neck and shoulder, side and back (long blow), second side neck and shoulder last side and last hind leg, positioning of the sheep and shearer in relation to the down tube, use of free hand, safety procedures, how to avoid second cuts and other damage to wool, and damage to sensitive and vulnerable parts of the sheep's anatomy.

What potential and existing hazards may be encountered in the workplace?

Sheep movement and handling, loose boards, obstacles, veterinary chemicals, damaged pens, uneven flooring, poor drag, uncovered belts and unsafe equipment and machinery.

What may be included in personal protective equipment?	Clothing and footwear that prevents feet crushing and skin abrasions, and tangles in machinery.
What injury to sheep and damage to wool needs to be avoided?	Injury to the vulnerable areas of the sheep such as teats, pizzles, ears, vulva, wrinkle and skin, eyes, hamstrings, joints, blood vessels and sinewy parts close to the surface. Damage to horns, ear tags, second cuts and skin pieces should also be avoided.
What volume expectations might be met?	Expected volume is 120 or more sheep per day for a professional shearer.
When safe handling techniques need to be applied?	For catching, dragging, positioning and releasing sheep.
What contamination might need to be identified?	Amongst the contaminants are lamb pouches, maggot affected wool, urine stains, dung stains, skin pieces, black fibres, loose woolpack fibres, baling twines, man-made fibres and clothing, dermatitis, branding dyes, dags, grease locks, burrs and vegetable matter, shed debris, wet fibre or water stains, cigarette butts, and towels.
How might sheep cuts be treated?	Cuts may be sutured in line with industry standards and animal welfare requirements.
How might flyblown sheep be treated?	Treatment may include the shearing of flyblown wool to skin, marking sheep and informing the owner/classer.
What types of problem sheep might be identified	Wet sheep, diseased sheep, sheep affected by prickly pear, those chemically treated prior to shearing, and other problems as listed in the various pastoral awards.
What shearing grievances and difficulties might occur?	This might relate to responsibilities of owners, overseers and shearers, and just causes and procedures for stopping work as specified within relevant awards.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to handle and shear 120 sheep or more per day using industry accepted methods and procedures. It also requires the ability to safely operate shearing equipment, avoid damage to sheep and fleece, meet volume expectations, and recognise problem and diseased sheep and apply treatments accordingly. Evidence must also be demonstrated in the employment of safe workplace and positive environmental practices.

The skills and knowledge to shear sheep must be transferable to a different work environment. For example, this could include different sheep breeds, wool types and conditions, and shearing sheds.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep
- animal welfare requirements in relation to sheep
- sheep behaviour

- personal protective clothing and equipment and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland or Western Australian Shearing Contractors Award
- relevant State/Territory legislation and awards, regulations and codes of practice with regard to workplace OHS and animal welfare.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- select and use equipment and materials appropriate for shearing sheep
- avoid contamination, second cuts and damage to wool, sheep and people
- shear sufficient sheep within eight hours to match skill level of a professional shearer
- ability to analyse and improve on improver shearer level
- co-ordination and rhythm
- suturing
- catch and release sheep safely
- demonstrate safe and responsible workplace practices
- provide due care and handle sheep humanely
- clean and maintain shearing equipment, site and facilities
- work in a team as a team member
- communicate problems, faults and workplace hazards, and to comprehend instructions provided by the owner or overseer
- tally shorn sheep count.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function. The relationship table found in the introduction of this training package will provide further guidance.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3130A

Unit Descriptor

Supervise clip preparation

This competency standard covers the process of overseeing the preparation of wool that has been shorn.

Supervising clip preparation is likely to be under limited supervision from others, with checking only related to overall progress. Supervising clip preparation is usually done within routines, methods and procedures where some discretion and judgement are required in the organisation and supervision of work, services, actions and the achievement of outcomes within time constraints.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Explain organisation requirements for clip preparation	1.1 The organisations requirements for quality and standard of wool clip preparation are clearly explained to the wool handlers. 1.2 The organisations procedures for operating safely and for the use of personal protective equipment are clearly explained to the wool handlers. 1.3 The impact of contamination in the wool is clearly explained to the wool handlers. 1.4 The key personnel in the wool shed/room are introduced or indicated to the wool handlers. 1.5 Responsibilities for specific functions or procedures are allocated to, and accepted by, wool handlers.
2. Oversee preparation of wool	2.1 OHS hazards are identified, risks assessed and suitable controls are implemented. 2.2 All personal protective equipment and clothing is selected, used and maintained appropriately by wool handlers. 2.3 Wool handlers follow the set procedures for each of the clip preparation tasks. 2.4 Skirting procedures are explained and skirtings are prepared according to instructions. 2.5 Discounts for specific parts of the fleece are clearly described to wool handlers. 2.6 Wool handlers remove and appropriately place waste in the full consideration of environmental implications. 2.7 Wool handlers maintain the wool room to minimise contamination of all wool lines. 2.8 All bending and lifting that is required is done according to safe working practices and using the available safety equipment.
3. Ensure bale descriptions are accurate	3.1 Bale descriptions for the various parts of the fleece are clearly described to the wool handlers. 3.2 Wool handlers ensure that bale descriptions are accurate and reflect the requirements of the organisation and the market.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In explaining the work requirements of the handlers in the team.	2
Collecting analysing and organising information	In assessing the current state of the work in order to more efficiently arrange work procedures and responsibilities.	1
Planning and organising activities	In ensuring that each person within the team is clear about the work and the responsibilities required of them.	1
Working with others and in teams	In organising and supervising the people within the team.	2
Using mathematical ideas and techniques	In calculating and checking the prices and discounts for the range of fleece parts under preparation.	2
Solving problems	In managing the people in the team to achieve given outcomes, and in dealing with the range of associated problems that present during the operation.	2
Using technology	While calculating prices and discounts, communicating with managers, and making or amending any records that are required.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Why is the quality and standard of clip preparation important?

It relates to consistency of clip preparation, limit of contamination in wool, segregation of lines and wool types, which may determine the ultimate return to the grower.

What may be included in personal protective equipment?

Clothing and footwear that prevents feet crushing and skin abrasions, as well as boots, overalls, gloves, protective eyewear, hearing protection, and respirator or face mask.

What OHS hazards and risks might be observed in the wool shed/room?

Safe systems and procedures for:

- the operation and maintenance of hazard-free facilities and equipment
- the maintenance of accommodation facilities in the woolshed/room
- handling livestock
- the administering of first aid
- safe manual handling, including lifting and carrying
- safe fleece/wool harvesting
- the protection from electrical hazards, hazardous noise and organic and other dusts
- the handling and storage of hazardous substances
- the health and safety of shearing personnel
- outdoor work including protection from solar radiation
- the appropriate use of personal protective clothing and equipment
- supervision of manual handling procedures, including correct lifting/bending.

Consideration of OHS issues for this unit should cover the proposed National code of practice for the Shearing Industry (Health, Safety and Welfare standards) published by the Australian Workers Union.

What skirtings are identified and prepared?

Different types of skirtings, merino skirtings, crossbred skirtings, belly wool, merino and/or crossbreds lambs wool, locks, crutchings, stained wool, various oddments, crutch, belly, shanks, locks, pieces, topknots, stain, dags, jowl, breech, and heavy vegetable matter.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in supervising clip preparation requires evidence that work outcomes are achieved by those under supervision within given timeframes.

The skills and knowledge required to supervise clip preparation must be transferable to a different work environment. For example, across a range of fleece types and uses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- parts of fleece
- bale descriptions for skirtings, bellies, lambs wool, premature shorn wool, locks and crutchings, and stained wool and oddments
- prices and discounts for bellies, lambs wool, premature shorn wool, and locks and crutchings
- relevant State/Territory OHS legislative requirements
- workplace hazards and OHS methods for dealing with them
- personal protective clothing and equipment requirements

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate specific and detailed requirements for clip preparation to operators
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3131A

Unit Descriptor

Transport livestock

This competency standard covers the functions required to safely and efficiently transport livestock to a destination within a specified timeframe.

It requires the application of knowledge and skills to handle livestock safely and humanely, maintain load within specifications, and monitor the health and condition of livestock during transit. An awareness of legislation requirements associated with animal welfare and the transport of livestock is also required. The work associated with this standard would require some judgement and discretion and is likely to be carried out under minimal supervision, with checking only related to overall progress.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for the transport of livestock	1.1 Transport plan is obtained, interpreted and clarified according to legislative and enterprise requirements . 1.2 Vehicles, equipment and resources are identified and arranged according to transportation plan. 1.3 Routine pre-operational checks of vehicle and equipment are carried out prior to use according to manufacturers specifications and enterprise requirements. 1.4 Load is calculated and maintained within working specifications.
2. Load livestock	2.1 Workplace safety policies and procedures are observed and followed according to OHS and enterprise requirements. 2.2 Load agreement is checked for compliance with transport code specifications and relevant documentation completed. 2.3 Prepared livestock are loaded and secured safely and humanely according to animal welfare, OHS and enterprise requirements. 2.4 Existing and potential hazards are identified and managed according to OHS, legislative and enterprise requirements.
3. Transport and unload livestock	3.1 Livestock are transported with minimal stress and discomfort according to animal welfare requirements. 3.2 Vehicles follow approved transport routes and comply with legislated speed limits, avoiding damage to livestock, personnel, vehicle or environment. 3.3 Livestock are unloaded safely and humanely using appropriate equipment and facilities according to manufacturers specifications. 3.4 Livestock condition and welfare are monitored and appropriate feed and water requirements are provided according to enterprise requirements.

4. Complete transportation operations
- 4.1 Vehicle shutdown procedures are carried out according to manufacturers specifications.
 - 4.2 Vehicle, equipment and facilities are cleaned, maintained and secured according to OHS and enterprise requirements.
 - 4.3 **Relevant information** is documented according to legislative and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In determining the requirements of the specific job from delivery and dispatch offices and transport authorities.	1
Collecting analysing and organising information	In relation to loading and the routes to be taken.	1
Planning and organising activities	For the safe transport of livestock.	1
Working with others and in teams	In completing specified activities and operations in conjunction with site personnel at both ends of the transport operation.	1
Using mathematical ideas and techniques	In observing loading limits and vehicle instrumentation, and in the calculation of time and distance.	1
Solving problems	By accessing information from supervisors, and in relation to mechanical problems.	1
Using technology	In operating any necessary equipment prior to, and during, the transport operation - communication technology, calculating equipment, and measuring and recording equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What information may be included in a transport plan?	This may include a verbal or written briefing outlining and detailing the nature and scope of the task including time of loading, type of loading and unloading facilities, type of vehicles, number of livestock per vehicle, watering and feeding points, travelling time, destination, access road plan and haul routes, condition of livestock, place of loading, labour requirements, the use of dogs and muzzles, potential hazards, safety and environmental protection procedures, animal welfare considerations, and instructions and schedule details. It may also include required authorisations and clearances, licensing and legislative requirements and hand-over procedures, and any relevant documentation.
What legislative requirements may apply to the transportation of livestock?	This may include the relevant State/Territory roads and traffic regulations and licensing requirements, Environmental Protection Act, OHS legislation, codes of practice with regard to animal welfare and land transport of livestock.
What enterprise requirements may be relevant to this standard?	These may include SOP, industry standards, Total Quality Management standards, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures, induction documentation, training materials, policy and procedures, and verbal or written instructions.
What equipment, vehicles and resources may be arranged?	This may include: • equipment, including cleaning equipment, power tools, hand tools, and loading and unloading equipment/ramps • vehicles, including floats, semi-trailers, road trains including B doubles, trucks and trailers, and rail transport • resources, including personnel, contractors, log books and relevant forms, vehicle specification and service manuals, vehicle tools, writing materials, first aid kit, fire control equipment, and breakdown gear.
What routine pre-operational checks may be carried out?	This may include pre-start and safety checks, service and maintenance procedures including checks of fuel and lubricant levels, and an assessment of tyres, wheels, controls and cables, warning lights and electrical systems, braking and hydraulic systems.
What may be involved in calculating a load?	Calculations may include the height, weight, width, and safety of the load.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- maintenance and operation of vehicles and equipment
- handling livestock
- manual handling, including lifting and carrying
- protection from mechanical hazards including hydraulics, hazardous noise and organic and other dusts
- health and safety of personnel and bystanders
- outdoor work including protection from solar radiation
- appropriate use of personal protective equipment.

What information may be included in a livestock load agreement?

This may include details of an agreement reached between loader and carrier of type and number of livestock to be transported, load weight, and recipient details.

What may be involved in the preparation of livestock immediately prior to transportation?

This may include the mustering, yarding and counting of livestock, and the appropriately applied and displayed identification marks, tags or tattoos.

What existing and potential hazards may be associated with transporting livestock?

Hazards may include the movement of livestock, operating and maintaining machinery and equipment including hydraulics and exposure to moving parts, noise, organic and other dusts, solar radiation and road transport.

What relevant information may be documented?

This may include the documentation of vehicle log books, time sheets, maintenance records, details of equipment and resource use and performance, transportation and delivery outcomes, and any hazard or incident details.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to maintain the health and welfare requirements of livestock during transit, while achieving the requirements of the transport plan within the scheduled timeframe. It also requires the ability to interpret and apply instructions, operate and maintain vehicles, operate loading and unloading equipment, humanely secure livestock, and comply with relevant legislative requirements and authorisations.

The skills and knowledge required must be transferable to a different work environment. For example, if competence is evident in the transport of sheep, it must also be evident that these skills can be adapted to transporting goats.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- industry and legislative requirements for the transport of livestock
- animal welfare and OHS legislative requirements
- environmental codes of practice with regard to vehicle operation and livestock production
- market requirements in relation to the quality and condition of livestock
- sourcing and costing transportation alternatives
- enterprise policies with regard to the use of vehicles and equipment
- equipment functions, technical capability and limitations
- hauling and towing procedures
- defensive driving techniques
- relevant documentation requirements and procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- steer, manoeuvre and position vehicle in a smooth and controlled manner in on and off-road conditions
- demonstrate safe and humane handling of livestock
- safely operate loading and unloading equipment
- apply hand-eye co-ordination
- demonstrate safe and environmentally responsible workplace practices
- obtain relevant licenses and permits
- recognise vehicle operational faults
- demonstrate emergency procedures and defensive driving techniques
- read and comprehend manufacturers specifications, work and maintenance plans, and MSDS
- interpret transport plan requirements
- communicate verbally to advise and anticipate conditions
- maintain records, reports, and log books.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3133B**Unit Descriptor****Prepare livestock for competition**

This unit of competency specifies the outcomes required to prepare and train livestock for competitive showing. It requires the application of knowledge and skills to groom and present livestock to competition standards, and maintain livestock health, welfare and nutritional requirements. Competency requires an awareness of legislative requirements with regard to animal welfare. The work in this unit is likely to be carried out under routine supervision within enterprise guidelines.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Follow instructions to prepare livestock for showing.	1.1 Livestock are identified and prepared for showing according to enterprise instructions . 1.2 Feed and water supplies are monitored and replenished, as required, and feed records are maintained to enterprise requirements . 1.3 Health and welfare status of livestock is monitored and abnormalities are promptly reported according to enterprise requirements. 1.4 Facilities are monitored and maintained, and existing and potential OHS hazards are recognised, risk assessed and reported to the supervisor.
2. Handle and groom livestock prior to competition.	2.1 Appropriate handling and grooming equipment is selected, checked and used according to instructions and manufacturers specifications. 2.2 Livestock are groomed for showing to competition standard according to instructions and enterprise requirements. 2.3 Livestock are conditioned to human handling and trained to the standard required for show handling and performance. 2.4 Handling procedures are conducted with minimum stress and discomfort to livestock, and maximum safety for livestock, handlers and other parties according to OHS and animal welfare requirements.
3. Present livestock.	3.1 Equipment to be used in showing is checked for correct operation and prepared for presentation requirements. 3.2 Livestock are presented using handling techniques to exhibit livestock to best advantage according to competition and enterprise requirements. 3.3 Instructions and requests from competition officials are complied with. 3.4 Relevant information is reported and recorded according to enterprise requirements.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- calculate livestock numbers and measure feed and water quantities
- demonstrate safe workplace practices
- groom livestock to competition standards
- maintain livestock facilities and handling equipment
- observe and describe the behaviour of livestock
- read and interpret written information, receive and comprehend oral information, write basic statements and maintain livestock records
- restrain, handle and groom livestock using safe and humane methods and procedures.

Required knowledge:

- competition requirements for grooming, handling and presentation
- components and functions of handling equipment
- handling techniques, restraint methods and when to use them
- livestock grooming and training techniques (to lead and stand correctly)
- livestock health and nutritional requirements
- preparation and maintenance requirements for livestock facilities and equipment
- livestock movement and behavioural characteristics in handling and confined areas
- OHS and animal welfare legislative requirements.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

What ***livestock*** may be relevant?

Sheep, goats, pigs, alpacas, horses, beef and dairy cattle.

What procedures might be involved in the ***preparation of livestock***?

Procedures may include halter training, leading, grooming, clipping, care of hooves and horns, special feed supplementation, presentation techniques, use of show equipment, special transport requirements, avoidance of stress, and show protocols.

What ***enterprise instructions*** may be provided?

Instructions may include the identity of livestock and location, feed and water requirements, handling requirements, health and welfare considerations, procedures for use of facilities, handling and grooming equipment, and procedures and requirements for competition standard grooming and breed standards.

What information might be included **in livestock feed records**?

Records may detail feed requirements, type, feed supplements, rate and frequency of feeding, quality and quantity of water supplies, and details of replenished supplies.

What **enterprise requirements** may be applicable?

SOP, industry standards, production schedules, MSDS, work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.

How might the **health and welfare status** of livestock be determined?

Health and welfare may be determined by the general observance of livestock behaviour, condition and wellbeing.

What **type of facilities** may be provided for livestock?

Facilities may include pens, sheds, paddocks and troughs.

What **OHS requirements** may be relevant?

Safe systems and procedures for:

- livestock handling including zoonoses control (Q Fever)
- the operation of handling equipment
- hazard and risk control
- manual handling including lifting
- outdoor work including protection from solar radiation, dust and noise
- the appropriate use and maintenance of personal protective equipment.

What **existing and potential OHS hazards** may be encountered in the workplace?

Livestock movement and handling, solar radiation, organic and other dusts, hazardous noise, moving machinery and vehicles.

What equipment might be used to **handle and groom livestock**?

Equipment may include rings, halters, combs, vacuums, brushes, driers, clippers, preparations applied externally or supplements taken orally, and restraining devices of a non-fibrillating nature.

What type of **competitions** may require the presentation of livestock?

Production evaluation trials, agricultural shows, livestock production trials, fleece competitions, sire reference schemes, carcass competitions, and livestock sales.

What **relevant information** might be recorded and reported?

Livestock behaviour and abnormalities, equipment faults and malfunctions, and showing details and outcomes.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in this unit requires evidence of the ability to provide livestock feed and water requirements, demonstrate safe and humane handling and grooming techniques, and present livestock to competition standards. It involves the ability to interpret and apply task instructions, prepare livestock facilities, use and maintain handling and grooming equipment, train livestock for showing, monitor health and wellbeing status, and anticipate livestock behaviour.

The skills and knowledge required to prepare livestock for competition must be transferable to another environment. For example, if competence is evident in preparing beef cattle for showing at production evaluation trials, it must also be evident for showing sheep in an agricultural show context.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (1) be applied?
 - Information with regard to livestock preparation and grooming requirements may be discussed with competition organisers and the supervisor.
- How can information be collected, analysed and organised (2)?
 - Information with regard to breeding and production measurement may be detailed and organised by livestock records.
- How are activities planned and organised (2)?
 - Livestock grooming preparation may be planned and conducted around feeding routines and showing schedules
- How can team work (2) be applied?
 - Team work may be applied in methods and procedures to handle and prepare livestock for presentation.
- How can the use of mathematical ideas and techniques (1) be applied?
 - Mathematics may be applied in the measurement and calculation of feed requirements and herd/flock numbers.
- How can problem-solving skills (1) be applied?
 - Positive and calming handling techniques to settle distressed livestock during preparation may be required to minimise disruption to competition schedules.
- How can the use of technology (1) be applied?
 - To communicate and record livestock data.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3134A

Unit Descriptor

Slaughter livestock

This competency standard covers the process of identifying and selecting livestock for slaughter, preparing slaughterhouse and equipment, conducting safe and humane slaughter of livestock, dressing hanging and protecting meat, and ensuring meat is appropriate to end-use requirements. Competency also requires the application of skills and knowledge to hygienically clean equipment and slaughter areas, and dispose of carcasses. All work in this area needs to be conducted in a way that ensures that slaughter and post-slaughter processes are conducted according to animal welfare, health and OHS requirements.

Unit Sector No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for slaughter operation	1.1 Reasons for slaughter are identified. 1.2 Equipment is prepared and transported to slaughter site. 1.3 Livestock to be slaughtered are selected and prepared for slaughter according to enterprise regulatory and animal welfare requirements. 1.4 Slaughter method is determined and killing facility identified.
2. Slaughter animal	2.1 Slaughter is conducted humanely, with a minimum of stress to the animal and according to OHS requirements. 2.2 Carcass is dressed, hung and protected. 2.3 Where necessary, reasons for slaughter are investigated. 2.4 All relevant environmental and health requirements and OHS, public health, hygiene and animal welfare legislation are followed and complied with during slaughter operations.
3. Complete slaughter operations	3.1 Offal and waste products are disposed of or destroyed in an environmentally responsible manner and according to State/Territory and local authority health standards. 3.2 Equipment and slaughterhouse is hygienically cleaned and stored for re-use. 3.3 Intended end-use of slaughtered meat is identified. 3.4 Meat is prepared for end-use.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communication with other property personnel on selecting livestock and slaughter needs.	1
Collecting analysing and organising information	Information on animals selected for slaughter might be organised for analysis, and organised by records and reports.	1
Planning and organising activities	To ensure the safe and humane slaughter of livestock.	1
Working with others and in teams	To complete destruction tasks.	1
Using mathematical ideas and techniques	Mathematics may be applied to calculate weights and percentages.	1
Solving problems	To ensure compliance with relevant legislation.	1
Using technology	To communicate and calculate slaughter and cuts.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

For what reasons might livestock be slaughtered?	Need to destroy animals due to disease or other animal health factors. Need to supply meat for human or animal consumption.
What equipment might be used?	Knives (boning and skinning), rifle, carcass hoist, plastic bags and labels, brooms and mops, water, hooks, cover for carcass, meat saw, table, and meat containers.
What livestock are covered by this standard?	Sheep, cattle and goats.

What criteria might be used to select livestock for slaughter?	Selected for human consumption on basis of age, body weight, health of livestock, fat cover, length of fleece, coat condition, and sex. Also economic viability, necessity to cull kids, lambs or calves, or the inability of the farm enterprise to economically restore the animal back to full health. Disease status and disease control measures.
What preparation might be required?	Shearing, emptying out, drafting and separation.
What enterprise regulatory and animal welfare requirements might need to be considered?	Meat industry health and safety guidelines, Australian standard for hygienic production of meat for human consumption, ANZFA food standards code, and State and Territory regulation regarding meat slaughter handling and consumption. Industry and enterprise quality assurance standards, codes of practice for selecting livestock, and industry standards on marketing livestock. Withholding periods, minimum residue levels, animal welfare legislation and codes of practice for welfare and humane slaughter of cattle, sheep and goats, requirements and specification of animal health tests, national residue tests, and AUSMEAT descriptions. Disease control legislation and requirements.
What slaughter method might be used?	Knife, rifle shot, bolt gun, or other humane methods that result in as the least possible pain being inflicted upon the livestock. Note: Where firearms are used, appropriate licences must be held.
What killing facilities might be used?	Slaughter house, meat rooms, shade, concrete slab, and open pits.
What steps might be taken to minimise stress to the animal?	Restraint of farm animals, e.g. dogs, cats, pigs, or poultry. Quick and decisive action in making kill.
What OHS requirements may be applicable to this standard?	Safe livestock handling systems and procedures, safe use of rifles and other firearms used to kill or stun animals, knives, safe use of hoist equipment, safe slaughterhouse techniques, national meat industry safety guidelines, safe manual handling systems and procedures, safe systems and procedures for outdoor work including protection from solar radiation, and the appropriate selection, use and maintenance of personal protective equipment including chain mail gloves to reduce risk of laceration.
What is involved in dressing livestock?	Dressed to avoid cuts to carcass or pelt, skin is prepared for drying, storage or disposal. Post mortem is arranged as necessary.

What is involved in hanging livestock?	Carcass is given maximum exposure to air circulation, protected, and covered and hung to set.
What protection might be needed?	Cold room, gauzed in meat room, cotton cover and protection may be sought from heat, dogs, flies, and wild animals.
How might an investigation be carried out?	A post-mortem to check for worm burden, hydatid infection, and other diseases.
What health requirements are relevant to this standard?	Correct bleeding, climatic conditions, time of slaughter, cheesy glands, and other diseases. Requirements set down by the State, Territory/Commonwealth governments, the meat industry and the enterprise.
What equipment might need cleaning?	Knives (boning and skinning), rifle, carcass hoist, plastic bags and labels, brooms and mops, water, hooks, cover for the carcass, neat saw, table, and meat containers.
What end-uses might there be for the meat?	Edible for human consumption or culled due to disease, instructions or economic viability. If end-use is for human consumption then carcass may be cut to maximise chops, boned out, or to provide large legs and shoulders for roasting.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in slaughtering livestock requires evidence of the ability to identify livestock for slaughter against instruction or set criteria, prepare for slaughter, and carry out humane slaughter safely according to occupational and health standards. In addition it requires an ability to dress hang and protect carcass, prepare it for end-use, and clean equipment and area after slaughter.

The skills and knowledge required to slaughter livestock must be transferable to a different work environment. For example, if competence is demonstrated in slaughtering sheep, it must also be evident in slaughtering cattle in both large and small enterprise operations.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the health restrictions and laws applying to the slaughter of livestock for sale, i.e. by registered abattoirs, not by other avenues
- relevant legislative health and OHS requirements, especially as they relate to livestock and slaughter, animal handling and safe livestock handling techniques
- enterprise and industry policies and codes of practice with regard to livestock slaughter, licensing, and recording and reporting requirements
- animal welfare legislation and withholding periods
- offal disposal regulations
- human health and hygiene
- health issues affecting both humans and livestock
- cattle diseases
- carcase hanging methods
- codes of practice for the welfare and husbandry of cattle, sheep and goats.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- kill and cut up livestock carcasses
- use equipment in a slaughterhouse
- clean and sterilise facilities and equipment
- store meat
- disposal of offal
- package cuts
- identify and select animals for slaughter.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3135A

Unit Descriptor

Artificially inseminate birds

This competency standard covers the process of artificially inseminating birds. Competency requires the application of knowledge and skills to prepare for insemination, prepare equipment and work sites, correctly select and thaw semen for insemination, inseminate birds, and clean up and record data after insemination is complete. This work is likely to be carried out under general guidance within enterprise guidelines.

Unit Sector No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for insemination of birds	1.1 Timing of insemination process is scheduled to ensure availability of resource and personnel requirements. 1.2 Hygiene factors are identified and appropriate procedures followed. 1.3 Semen supplies are accessed from appropriate and reliable sources and stored appropriately. 1.4 Birds are prepared to maximise success of insemination program. 1.5 Suitable personal protective equipment and clothing is selected, used and maintained according to OHS and enterprise requirements.
2. Inseminate birds	2.1 Semen is prepared according to accepted industry and enterprise practices. 2.2 Insemination equipment is sterile and clean, and applied according to industry code of practice. 2.3 Intended recipient is correctly identified. 2.4 Intended recipient is restrained and prepared for insemination to optimise results according to recognised handling techniques that minimise stress. 2.5 Insemination is carried out in sterile conditions and according to appropriate hygiene procedures. 2.6 Data on insemination process is accurate and recorded according to enterprise requirements.
3. Clean work area and equipment	3.1 Waste is disposed of according to recommended hygiene standards and environmental policy. 3.2 Work area is cleaned to industry standards and returned to operating order. 3.3 Restraints are cleaned and returned to safe and operational order. 3.4 Birds are safely returned to designated area according to enterprise requirements and instructions.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Insemination processes may be accurately reported.	1
Collecting analysing and organising information	Details of insemination processes and outcomes, and flock management may be observed and monitored for analysis, and organised by records and reports.	1
Planning and organising activities	Insemination schedule monitoring activities may be planned and organised to ensure optimum results.	1
Working with others and in teams	Team work may be applied in methods and procedures to handle and inseminate birds.	1
Using mathematical ideas and techniques	Numbers of birds inseminated must be recorded.	1
Solving problems	Insemination procedures may require remedial action to ensure correct semen is identified.	1
Using technology	To communicate, calculate and record bird insemination data.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What birds are covered by this unit?	Birds covered by this process include chickens, ducks, turkeys and other commercially produced birds.
What hygiene factors need to be considered?	Sterile equipment and clean work sites are essential to the insemination process.
Who might be considered to be appropriate and reliable sources?	These should be legitimate and industry recognised suppliers of semen.

What are the key considerations when storing semen?

Semen needs to be stored at the correct temperature prior to use, and in a safe and secure environment.

How might birds be prepared for artificial insemination?

Observation and checking of bird to ensure bird is at correct stage of laying.

What OHS requirements are relevant to this standard?

Safe bird handling systems and procedures including zoonoses control (Q Fever), identify hazards, assess and report risks, and safe manual handling systems and procedures. Safe systems and procedures for the application and storage of hazardous substances (drenches, vaccines), and the handling of veterinary equipment (syringes, needles, vaccines). Safe systems and procedures for outdoor work including protection from solar radiation, and the appropriate use of personal protective equipment.

What is involved in preparing semen before artificial insemination?

Straws are checked for correct sire identification, and semen is thawed in readiness for insemination.

What insemination equipment might need to be sterile and clean?

Bird restraints, gloves and pipettes.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in artificially inseminating birds requires evidence of the ability to prepare for artificial insemination, prepare semen and inseminate birds. In addition, it requires the ability to handle birds humanely and safely, and to clean up work areas and equipment and record data.

The skills and knowledge required to artificially inseminate birds must be transferable to another rural workplace. For example this may include different bird types and insemination techniques.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- working knowledge of enterprise bird production plan
- basic bird breeding principles
- bird health and abnormalities
- semen thawing techniques
- preparation requirements for artificial insemination of birds
- bird behavioural characteristics
- handling techniques, restraint methods and when to use them
- enterprise and industry identification system for birds
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS and bird welfare
- legislative and regulatory controls with regard to artificial insemination
- enterprise and industry policies with regard to artificial insemination, and recording and reporting routines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- sterilise equipment and prepare hygienic worksite prior to insemination procedures
- employ safe work practices
- clean up work site and safely dispose of waste
- communicate effectively with others.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3136A**Comply with industry animal welfare requirements****Unit Descriptor**

This competency standard covers the process of complying with industry animal welfare requirements in the production of livestock. It requires the ability to implement animal welfare practices, implement standard operating procedures and report problems that affect animal welfare. Complying with industry animal welfare requirements requires knowledge of animal welfare requirements, animal production processes, Hazard Analysis Critical Control Point (HACCP) approach to quality assurance, and enterprise policies, guidelines and standard operating procedures relating to animal welfare.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Apply animal welfare practices	1.1 Elements of the industry animal welfare requirements are determined. 1.2 Hazards to animal welfare are identified for work area according to enterprise guidelines and standard operating procedures. 1.3 Critical control points for work area are determined according to workplace procedures . 1.4 Record keeping on animal welfare is completed according to industry QA requirements.
2. Comply with standard operating procedures	2.1 Standard operating procedures in respect to animal welfare requirements are implemented in accordance with enterprise requirements. 2.2 Non-conformance is reported to supervisor according to enterprise/industry requirements . 2.3 Corrective action taken in accordance with enterprise policy and procedures.
3. Report problems that affect animal welfare	3.1 Recognise potential or existing animal welfare problems. 3.2 Identify instances of problems of animal welfare from specifications or work instructions. 3.3 Report variation and potential problems to supervisor/manager according to enterprise guidelines.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through record keeping and reporting to management as required.	-
Collecting analysing and organising information	Through complying with standard operating procedures.	-
Planning and organising activities	According to industry approaches to animal welfare.	2
Working with others and in teams	Through teamwork in implementation of the animal welfare.	2
Using mathematical ideas and techniques	Through recording of data according to SOPs.	1
Solving problems	Through recognising variation and non-compliances, and undertaking corrective work and/or reporting to supervisors.	2
Using technology	Through use of computers and communication systems.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What elements of the industry animal welfare requirements should be considered?

These include Hazard Analysis Critical Control Point (HACCP) charts, mission statement, work instructions, corrective action and monitoring procedures, standard operating procedures, and enterprise and industry policies and welfare code of practice.

What animal welfare requirements may be relevant to this competency standard?

These include:

- Housing and accommodation for livestock.
- Space allowances and/or stocking densities.
- Equipment including feeders and waterers, environmental control equipment and back-up systems, and alarms in case of equipment failure.
- Lighting.
- Ventilation including fresh air, dust filters, humidity, and noxious gases.
- Temperature including cooling and heating, and extreme weather conditions.
- Protection from predators, vermin, fires and floods.
- Food with diet containing adequate nutrients.
- Water, provision of cool water in summer and checking it is not contaminated or deleterious to health.
- Health and distress. Signs of ill health in livestock may include reduced food and water intake, reduced production, changes in the nature and level of their activity, abnormal condition, or changed physical features. Evidence of behavioural changes may indicate ill health or distress, or both.
- Transport of livestock.
- Handling of livestock by stock people.

What hazards may be relevant to this competency standard?

These may include:

- Physical hazards where foreign objects are present in animals.
- Chemical hazards resulting from residues such as antibiotics, pesticides, alkaloids, and other substances used in animal production.
- Biological hazards where contamination is from other animals (e.g. mice, rats, cats), poor housing/transport conditions and dirty water affects animal health and food quality.
- Animal health hazards resulting from poor handling of animals, unhealthy or diseased animals, extreme weather conditions, poor loading and transport conditions, and time off feed.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in complying with industry animal health requirements requires evidence that industry animal welfare requirements have been successfully understood and complied with.

The skills and knowledge required to comply with industry animal welfare requirements must be transferable to a range of work environments and contexts. For example, this could include different animals, production systems, and industry animal health requirements.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- industry animal health requirements
- animal production processes
- enterprise policies, guidelines and standard operating procedures relating to animal welfare
- enterprise OHS requirements
- animal health and welfare
- animal handling techniques
- codes of practice for welfare.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- implement animal welfare practices
- implement standard operating procedures
- report problems that affect animal welfare
- handle livestock in a humane and caring manner.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3137A**Unit Descriptor****Carry out basic hoof care procedures**

This competency standard covers the process of maintaining horse hooves in premium condition. It requires the application of skills and knowledge necessary to inspect hooves, to perform basic care in line with enterprise policy, and to provide assistance to farriers and veterinarians where appropriate.

Work is likely to be under limited supervision from others, with checking only related to overall progress. The inspection and maintenance of hooves is performed within routines, methods and procedures, with necessary skills such as the basic use of farriery tools to complete routine hoof care.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to perform hoof care on horses	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Organisation requirements for the care and handling of horses within the guidelines of animal health and welfare are recognised and understood. 1.3 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process. 1.4 Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary. 1.5 Suitable personal protective equipment is selected, used and maintained.
2. Provide hoof care to horse	2.1 Basic farriery tools are selected for appropriate use. 2.2 Horses legs are picked up and hooves picked and cleaned according to set leg routines. 2.3 Legs are held and the hoof presented to allow treatment to be carried out efficiently and safely. 2.4 Basic hoof care is provided according to organisation guidelines and procedures. 2.5 OHS hazards are continually identified while handling horses, risks assessed and suitable controls implemented.
3. Replace dislodged and loose shoes	3.1 Loose shoe is removed and straightened if required. 3.2 Loose shoes are tightened by re-nailing or application of extra nails. 3.3 Cast shoe is reapplied taking care to avoid injury to the animal and all nails are clinched. 3.4 Farrier assistance is called where hoof trimming or shoe shaping is required.

4. Complete maintenance and administration
- 4.1 Equipment is cleaned in according to manufacturers specifications, organisational procedures and regulations.
 - 4.2 Attachments and other ancillary equipment are cleaned and stored according to with manufacturers specifications, organisational procedures and regulations.
 - 4.3 All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.
 - 4.4 All required documentation **recorded** accurately and promptly according to organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In communicating with farriers and veterinarians.	1
Collecting analysing and organising information	In organising treatment timetables and treatment regimes.	1
Planning and organising activities	By organising personnel and contractors.	2
Working with others and in teams	By working with others to achieve overall enterprise goals.	2
Using mathematical ideas and techniques	In estimating age and treatment intervals.	1
Solving problems	When dealing with hoof injury.	2
Using technology	When calculating and communicating.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Where might organisation work procedures be found for the work to be undertaken?

Work procedures will be based on sound agricultural principles and practices and may include supervisors oral or written instructions, organisation standard operating procedures, specifications, work notes, waste disposal, recycling and re-use guidelines, and OHS procedures.

What personal protective and equipment may be relevant to this standard?	This may include boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).
What farriery tools might be need?	Hoofpicks, paring knife, farrier's hammer, anvil, clinching pliers, and horseshoe nails.
What does hoof care involve?	Hoof care, in particular for young horses will require regular attention to minimise hoof damage through cracking, cuts or abrasions.
What actions could be taken to eliminate or minimise the OHS risk?	The range of actions are both systematic and run at an operational level. They are listed below: • safe work systems and procedures to reduce kicks, bites and crushing injuries from horses - this will include using calm and positive actions to avoid alarming stock • safe manual handling systems and procedures • safe horse restraining procedures used while working on horses • clear communication between workers, especially when working together within a close proximity • all procedures must be carried out in compliance with the provisions of the Workplace Health and Safety Acts, their regulations and the relevant codes of practice.
What type of shoeing is covered by this unit?	Cold shoeing is the only type of work covered by this unit. Hot shoeing is not covered in this unit or this Training Package.
What information might be recorded and how might it be documented?	Dates, times and periods of operation and maintenance, and substances used including quantities and methods. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

Competence in carrying out basic hoof care procedures requires evidence of the ability to inspect and evaluate state of hooves, and perform required tasks in basic maintenance. It also requires the ability to assist professionals with intensive hoof treatment. Evidence must be demonstrated in complying with relevant legislative requirements.

The skills and knowledge required to carry out basic hoof care procedures must be transferable to a different work environment. For example, across a range of breeds, uses and ages of horses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the structure of the hoof and associated problems
- hoof care and shoeing procedures
- hoof injury
- the need to maximise hygiene practices and awareness.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- competently handle and restrain horses of all classes for hoof procedures
- handle horses and duties around them in a firm but calm, gentle and unhurried manner
- complete horse records clearly and accurately
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function, for example:

RTE3104A - *Carry out basic dentition care procedures on horses*

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3138B**Unit Descriptor****Determine wool characteristics**

This unit of competency specifies the outcomes required to determine wool characteristics as part of clip preparation work. It requires the ability to assess key wool characteristics, identify wool faults and recognise impurities. Determining wool characteristics requires knowledge of different breeds of sheep or alpaca, Australian wool characteristics, fleece measurement criteria, processing methods, wool growth, skin and fibre biology, documentation of wool clips, the code of practice for the Preparation of Australian Wool Clips or the Alpaca Industry Best Practice Standards for Harvesting of Alpaca Fibre, and relevant Quality Standards.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Assess key wool characteristics.	1.1 Wool is examined for fibre diameter. 1.2 Length and strength of wool are checked. 1.3 Assessment of colour and character is made. 1.4 Wool is examined for handle and style. 1.5 Staple formation and tip is checked. 1.6 Wool is examined for medullation and/or pigmentation. 1.7 Assessment of breed type is made.
2. Identify wool faults.	2.1 Wool is examined for dogginess. 2.2 Wool is checked to identify cotts. 2.3 Skin pieces are identified. 2.4 Wool is checked for presence of dermatitis.
3. Recognise impurities.	3.1 Wool is examined for natural impurities. 3.2 Applied impurities are identified and categorised. 3.3 Acquired impurities are identified and categorised.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- assess key wool characteristics
- identify wool faults
- recognise impurities.

Required knowledge:

- breeds of sheep or alpaca
- documentation of wool clips
- Fleece Measurement Criteria - techniques used to measure wool characteristics
- for alpaca fleece, Alpaca Industry Best Practice Standards for Harvesting of Alpaca Fibre and relevant Quality Standards
- for sheep wool, the code of practice for the Preparation of Australian Wool Clips and relevant Quality Standards
- processing methods - woollen and worsted, and stages of processing
- raw wool characteristics and their effect on processing and final product
- wool characteristics - diameter, length and strength, colour, yield, VM type, curvature and comfort factor
- wool growth, skin and fibre biology, and effect of genetics and environment on fibre characteristics.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

What ***wool*** may be relevant?

Wool may include that from different breeds, different age groups, different geographical regions, and various parts of the fleece. It may also be new and/or old wool and may display seasonal variations.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in determining wool characteristics requires evidence that assessment of wool has been accurately carried out according to enterprise and industry guidelines and standards. The skills and knowledge required to determine wool characteristics must be transferable to a range of work environments and contexts. For example, this could include different breeds, wool types, seasonal, conditions and enterprises.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (2) be applied?
 - With owner/manager and shearing team.
- How can information be collected, analysed and organised (2)?
 - By receiving, interpreting, and following instructions.
- How are activities planned and organised (2)?
 - To ensure an efficient flow of work.
- How can team work (2) be applied?
 - In working with others to ensure an efficient flow of work.
- How can the use of mathematical ideas and techniques (2) be applied?
 - In determining wool characteristics.
- How can problem-solving skills (2) be applied?
 - In identifying impurities.
- How can the use of technology (1) be applied?
 - By using and calibrating measuring devices.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3139A**Unit Descriptor****Maintain consistent shearing performance**

This competency standard covers the process of maintaining shearing performance. It requires the ability to prepare and set up equipment to maintain shearing output, assess and monitor the shearing conditions and environment, and maintain control, coordination, rhythm and output during shearing. Maintaining shearing performances requires knowledge of components and functions of shearing equipment and machinery, handling and shearing techniques and positions, OHS and animal welfare legislative requirements, national codes of practice for the shearing industry, and relevant industrial wards.

NB: Chemicals must only be applied by qualified persons outside the workplace.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Maintain shearing control, coordination and rhythm	1.1 Maintain consistent rhythm for 8-hour working day. 1.2 Maintain coordination of footwork to assist control and blows placement for 8-hour working day. 1.3 Analyse eye to hand coordination to optimise consistent blow placement.
2. Maintain shearing output	2.1 Shearing output and quality are maintained to meet expectation of the grower, contractor and self in terms of shearing conditions. 2.2 Shearing output and quality are maintained in terms of minimum industry output requirements and minimum industry quality requirements. 2.3 Evaluate current stamina/fitness program, including eating, exercise, back care, fluid intake and rest periods, for means of improvement maintaining shearing performance.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to shearing procedures and problems associated with contaminated fleece or problem sheep may be discussed with colleagues and reported to the classer and/or overseer /supervisor.	3
Collecting analysing and organising information	Shearing outcomes, including information with regard to shorn sheep, problem sheep and contaminated wool, may be detailed and tallied and organised by records and reports.	3
Planning and organising activities	Shearing activities may be planned and co-ordinated with time schedules and numbers of sheep or sequenced as required.	3
Working with others and in teams	Team work may be applied in treating problem sheep, in arranging for the collection of shorn fleece, working with other shearers, experters/technician, wool handlers and classers.	3
Using mathematical ideas and techniques	Mathematics may be applied in the tallying of shorn sheep, mob breaks or cut-outs.	3
Solving problems	Contingencies for dealing with problem sheep and contaminated wool may be planned and prepared to minimise disruption to shearing schedules. Alternative planning may also be needed if complications occur when catching or shearing sheep.	3
Using technology	To communicate, record and calculate shearing outcomes and tallies, in using handpieces and shearing equipment, advances in manufacturing machinery and equipment.	3

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What sheep might be subject to the shearing operations?

All ages and genders of sheep, including rams, ewes, wethers, lambs, hoggets, and stags.

What processes might be involved in moving sheep?

Sheep may be caught and moved from the catching pen to the board using safe handling techniques.

What organisational, industry and animal welfare standards might apply to sheep shearing?

Organisational standards may include, standard operating procedures, industry standards, production schedules, work notes, work plans, manufacturers specifications, supervisors instructions, and workplace policies and procedures (including recycling, environmental and land management).

Industry and animal welfare standards/requirements might include: National Codes of Practice for the Shearing Industry (Health, Safety and Welfare standards), Environmental Protection Act, and Animal Welfare Act.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- safe operation and maintenance of machinery and equipment including guarding of exposed moving parts
- the operation and maintenance of hazard-free facilities and equipment
- the maintenance of accommodation facilities
- handling livestock
- the administering of first aid
- safe manual handling, including lifting and carrying
- safe fleece/wool harvesting
- the protection from electrical hazards, hazardous noise and organic and other dusts
- the health and safety of shearing personnel
- the appropriate use of personal protective clothing and equipment
- animal welfare considerations including disease control.

What adverse shearing conditions may be applicable to this standard?

These may be extreme temperatures, wet or contaminated wool.

What range of shearing methods may be adapted to accommodate limitations?

This may include detailed procedures for removal of wool from the belly and crutch, first hind leg, wig, first side neck and shoulder, side and back (long blow) second side neck and shoulder last side and last hind leg, positioning of the sheep and shearer in relation to the down tube, use of free hand, safety procedures, how to avoid second cuts and other damage to wool, damage to sensitive and vulnerable parts of the sheep's anatomy.

What potential and existing hazards may be encountered in the workplace?

Hazards may include sheep movement and handling, loose boards, obstacles, hazardous substances, veterinary chemicals, damaged pens, uneven ground poor drag, uncovered belts, unsafe machinery and equipment.

What may be included in personal protective equipment?	Clothing and footwear that prevents feet crushing, skin abrasions and tangles in machinery
What injury to sheep and damage to wool needs to be avoided?	Injury to the vulnerable areas of the sheep such as teats, pizzles, ears, vulva, wrinkle and skin, eyes, hamstrings, joints, blood vessels and sinewy parts close to the surface. Damage to horns, ear tags, second cuts and skin pieces should also be avoided.
What volume expectations might be met?	Expected volume is 120 or more sheep per day.
When would safe handling techniques need to be applied?	Catching, dragging, positioning and releasing sheep.
What contamination might need to be identified?	Amongst the contaminants are lamb pouches, maggot affected wool, urine stains, dung stains, skin pieces, black fibres, loose woolpack fibres, baling twines, man-made fibres and clothing, dermatitis, branding dyes, dags, grease locks, burrs and vegetable matter, shed debris, wet fibre or water stains, towels, cigarette butts.
How might sheep cuts be treated?	Cuts may be sutured in line with industry standards and animal welfare requirements.
How might flyblown sheep be treated?	Treatment may include the shearing of flyblown wool to skin, marking sheep and informing the owner/classer .
What types of problem sheep might be identified?	Wet sheep, diseased sheep, sheep affected by prickly pear, those chemically treated prior to shearing and other problems as listed in the various pastoral awards.
What shearing grievances and difficulties might occur?	This might relate to responsibilities of owners, overseers and shearers and just causes and procedures for stopping work as specified within relevant awards.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in maintaining consistent shearing performance under complex and variable conditions requires evidence that shearing has been consistent at the professional shearer level under a range of different and complex conditions. The skills and knowledge required to maintain consistent shearing performance must be transferable to a range of work environments and contexts. For example, this could include different sheds, sheep and wool types and conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- types of shearing sheds, boards and catching pens
- shearing machinery required and their relative functions
- industry agreed shearing techniques and positions and method of shearing
- safe handling techniques for catching, dragging, shearing and releasing sheep
- anatomy of all types of sheep
- animal welfare requirements in relation to sheep
- sheep behaviour
- personal protective clothing and equipment and when and how it should be used
- Federal Pastoral Industry Award and/or State Shearing Award of Queensland or Western Australian Shearing Contractors Award.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- prepare and set up equipment to maintain optimum shearing output
- ability to maintain application of improved techniques
- ability to maintain speed and accuracy
- assess and monitor the shearing conditions and environment
- ability to maintain control, coordination, rhythm and output during shearing
- work in a team as a team member.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3140A**Carry out post-mortem examination of livestock****Unit Descriptor**

This competency standard covers the process of conducting a post-mortem examination of an animal or bird under limited supervision and following established procedures. It involves collating information, opening the animal carcase, visually inspecting organs and tissues and taking samples for expert analysis. A veterinarian will usually interpret results of the post-mortem.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to conduct post-mortem	1.1 Site for post-mortem is selected, taking into account proximity to other facilities and environmental implications. 1.2 The site to be used for the post-mortem is prepared by cleaning, and by ensuring that it is located away from other livestock, and that blood and fluids will not be able to contaminate surrounding areas or facilities. 1.3 All relevant preliminary information about the animal or bird to be examined is collated or obtained. 1.4 OHS hazards associated with the procedure are identified and appropriate action is taken. 1.5 Correct clothing, equipment and resources are obtained and prepared for use 1.6 The animal to be examined is moved to the post mortem area using appropriate manual lifting techniques and/or equipment. 1.7 Expert assistance is sought if required.
2. Carry out post-mortem examination	2.1 External assessment is carried out and outward signs of disease or injury are noted. 2.2 Where unusual symptoms are present, expert advice and assistance is sought before proceeding. 2.3 Animal or bird is cut open without cutting stomach cavity or organs using appropriate techniques and equipment. 2.4 Organs, tissues and joints are examined. 2.5 Samples of organs and other tissues are taken where appropriate, and placed in labelled containers to meet enterprise and laboratory requirements. 2.6 Details of all features examined are recorded according to enterprise procedures.

3. Complete post-mortem examination
 - 3.1 Carcase is disposed of using appropriate equipment according to enterprise quarantine and other procedures.
 - 3.2 Correctly labelled and packaged samples are sent to the laboratory for analysis.
 - 3.3 All preliminary information about the animal or bird examined and the records of observations made during the post-mortem are collated and forwarded to supervisor or veterinarian for analysis and diagnosis.
 - 3.4 All equipment used is cleaned and disinfected after use and before putting away.
 - 3.5 Area used for the post-mortem is cleaned and, where appropriate, disinfected.
 - 3.6 Disposable gloves are disinfected before being disposed of according to enterprise procedures
 - 3.7 Hands are thoroughly washed.
 - 3.8 Clothing is changed and placed in appropriate bin for laundering and boots are disinfected if appropriate.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Collecting and presenting all relevant information about the animal/bird being examined.	2
Collecting analysing and organising information	Preparing a complete report with accompanying samples.	2
Planning and organising activities	Conducting a post-mortem in the correct sequence, and using correct tools and equipment.	1
Working with others and in teams	Seeking expert assistance, working as a team conducting a post-mortem examination and taking into account laboratory/veterinarian requirements for information.	1
Using mathematical ideas and techniques	Recording details relating to the animal or bird being examined, such as weight, age, date/time of death.	1
Solving problems	Making an initial assessment of the possible and likely causes of death. This initial assessment will guide the direction of further examination to obtain evidence of actual cause of death.	2
Using technology	Using scales, personal computer and appropriate tools and equipment to conduct a post-mortem examination, take samples and produce a report.	-

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What factors need to be considered in selecting a site suitable to carry out the post-mortem examination?

Post mortems may be carried out on the farm. They may also be conducted in a laboratory.

The site must be able to be cleaned both before and after the examination. It must be located away from other animals, and blood and fluids must not be able to contaminate surrounding areas or facilities.

What information should be collected before conducting the post mortem?

- date of death or the date animal or bird was found dead
- identification number and age of animal
- location of animal or bird (e.g. pen, shed or paddock number)
- approximate weight
- body condition
- previous health problems
- period of ill health (e.g. when first noted as being sick or off feed)
- health of other stock.

Other details may be required by enterprise policies and procedures.

What OHS hazards may be involved?

Risks may include exposure to zoonoses, injuries from manual lifting and cuts or needle stick injuries.

What clothing, equipment and resources might be required to carry out a post-mortem examination?

An autopsy kit should contain a knife and a steel or sharpening stone, scissors and forceps or tweezers, swabs and plastic bags/containers to collect specimens, plastic or rubber disposable gloves, bucket, scrubbing brush and disinfectant.

Other equipment may include pen and notebook, wheelbarrow/trolley for disposal of carcass.

What expert assistance may be needed?

A veterinarian may be needed where unusual symptoms are detected. Assistance may also be needed where a large animal is to be lifted or moved.

What are unusual symptoms?

Unusual symptoms may indicate the presence of notifiable and potentially hazardous conditions or diseases such as anthrax or other zoonoses.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in conducting post-mortem examinations requires evidence that relevant and useable data and biological samples are collected both before and as part of the post mortem to enable an accurate diagnosis of the cause of death.

The skills and knowledge required to conduct the post-mortem examination must be transferable to a different work environment. For example, conduct post-mortems on pigs, goats, sheep, and on animals of varying ages.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- typical causes of death for the species being examined
- sequence of actions in conducting a post mortem examination
- requirements for correct preparation, labelling and packaging of biological and potentially hazardous samples
- position and features of major organs in normal animal or bird of the species being examined.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills are:

- accurately cut open an animal or bird for post mortem examination
- sharpen knives
- handle dead animals and birds without risk to self or others.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function, for example:

RTE3504A Collect samples for rural production or horticulture monitoring program.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3141A

Unit Descriptor

Prepare fleece wool for classing

This competency standard covers the skills necessary to prepare fleeces in preparation for classing. It involves the inspection of the fleece on the wool table, the identification and removal of inferior parts of the fleece, the identification and removal of any faults and impurities that will affect the processing of the fleece in order to leave the fleece uniform and consistent with other fleeces from the mob. The fleece is then rolled and presented to the classer with the shoulder wool uppermost for classing.

The classer provides the overall direction of the level of preparation and skirting required, but the woolroller must be able to interpret and apply these directions while allowing for differences between individual fleeces. This must be completed within the pressures of commercial wool harvesting.

It includes the requirement for the woolroller to work as a team member with shearers and other shed hands and under the direction of a wool classer, and to do so with the appropriate speed.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Characteristics of greasy wool are identified and related to processor requirements	1.1 Characteristics of wool important in processing are identified and uniformity within the fleece is assessed. 1.2 The portion of fleece to be removed is determined to ensure uniformity of the fleece with the other fleeces from the mob.
2. Fleeces are checked for impurities	2.1 Natural impurities of wool are identified, and portion of fleece to be removed is determined. 2.2 Vegetable matter types are identified, and portion of fleece to be removed is determined. 2.3 Mineral impurities are identified and related to yield potential identified, and portion of fleece to be removed is determined. 2.4 Any contamination of the fleece is removed.
3. Fleeces are checked for presence of wool faults	3.1 Hairy breeches and cotted wool are identified, if present, and portion of fleece to be removed is determined. 3.2 Unscourable colour, water stain and dermatitis are identified and handled as directed. 3.3 Skin pieces are removed and placed where directed. 3.4 Work is carried out at a rate appropriate to the enterprise.

4. Fleeces are skirted and rolled
 - 4.1 Fleeces are skirted to remove those portions determined above that adversely affect the uniformity and value of the remaining fleece.
 - 4.2 Fleeces containing clumpy vegetable matter are double skirted, or prepared as directed.
 - 4.3 Necks and backs are assessed for soundness, dust and VM levels, and handled as directed.
 - 4.4 Fleeces are rolled and presented to classer.
 - 4.5 Skirtings are placed in the nominated bins.
 - 4.6 Waste is removed and appropriately disposed of taking into account environmental implications.
 - 4.7 All bending and lifting that is required is done according to safe working practices and using the available safety equipment.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By interpreting and understanding the verbal and visual signals given by the supervisor.	2
Collecting analysing and organising information	In sorting the parts of a fleece for different wool types and quality.	2
Planning and organising activities	In ensuring the bins are ready to accept fleeces and fleece parts.	2
Working with others and in teams	In working with others in the wool shed to achieve a smooth shearing operation.	2
Using mathematical ideas and techniques	Not applicable.	-
Solving problems	By correctly identifying and removing wool contamination.	2
Using technology	Not applicable.	-

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

How might the wool be contaminated?	It may contain lamb pouches, black fibres, loose woolpack fibres, dags, grease locks or skin pieces; it may be maggot or dermatitis affected, or be stained by urine, water or dung. There may also be baling twines, man-made fibres and clothing, or excessive vegetable matter contained in the wool.
What wool faults may be relevant to this competency standard?	Wool may be cotted; exhibit hairy breech; or contain unscourable colour, water stain or dermatitis.
At what rate should non-fleece wool be prepared?	Rate of preparation should relate to commercial standards and requirements relevant to the enterprise.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in preparing fleece wool for classing requires evidence that wool has been properly prepared for classing within the pressures of commercial wool harvesting. The skills and knowledge required to prepare fleece wool for classing must be transferable to a range of work environments and contexts. For example, this could include different wool types, sheds, shearing teams and classing operations.

What specific knowledge is needed to achieve the performance criteria?	Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below: • wool characteristics • principles and requirements of wool processing • principles of wool growth • identification of fleece parts • diagnosing wool faults • identification of impurities.
What specific skills are needed to achieve the performance criteria?	To achieve the performance criteria, some complementary skills are required. These skills include the ability to: • assess levels of vegetable matter and other impurities • accurately skirt fleeces at commercial rates • roll fleeces.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3142A**Unit Descriptor****Prepare skirtings and oddments**

This competency standard covers the skills necessary to prepare non-fleece wool to a standard that complies with the requirements of the code of practice. The wool handler works under the direction of the wool classer, but supervision cannot extend to all non-fleece wool preparation activity.

Preparing non-fleece wool is performed within a defined range of contexts in which the choice of actions required is usually clear, and there is some discretion in the range of options to be applied.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare skirtings	1.1 Identify types of skirtings and oddments. 1.2 Identify types of pieces and separate according to enterprise requirements, code of practice and industry agreed quality management system. 1.3 Prepare Merino skirtings in accordance with wool classers directions . 1.4 Prepare Crossbred skirtings in accordance with wool classers directions.
2. Prepare belly wool	2.1 Identify belly wool. 2.2 Separate belly wool according to enterprise requirements, code of practice and industry agreed quality management system. 2.3 Remove stains and briskets in accordance with wool classers directions. 2.4 Prepare Crossbred and Merino belly wool in accordance with wool classers directions.
3. Prepare lambs wool	3.1 Identify types of lambs wool. 3.2 Separate lambs wool according to enterprise requirements, code of practice and industry agreed quality management system. 3.3 Remove stains and trimmings in accordance with wool classers directions. 3.4 Prepare Merino lambs wool in accordance with wool classers directions. 3.5 Prepare Crossbred lambs wool in accordance with wool classers directions.
4. Prepare locks	4.1 Identify types of locks. 4.2 Separate board and table locks in accordance with wool classers directions. 4.3 Prepare Crossbred and Merino locks in accordance with wool classers directions.
5. Prepare crutchings	5.1 Identify types of crutchings. 5.2 Remove stains and other impurities in accordance with wool classers directions. 5.3 Prepare Merino and Crossbred crutchings in accordance with wool classers directions.

6. Prepare stain	6.1 Identify types of stain. 6.2 Prepare Merino and Crossbred stain in accordance with wool classers directions.
7. Prepare other oddments	7.1 Define and identify other oddments. 7.2 Describe the preparation of other oddments

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By interpreting and understanding the verbal and visual signals given by the supervisor.	2
Collecting analysing and organising information	In sorting the parts of a fleece for different wool types and quality.	2
Planning and organising activities	In ensuring the bins are ready to accept fleeces and fleece parts.	2
Working with others and in teams	In working with others in the wool shed to achieve a smooth shearing operation.	2
Using mathematical ideas and techniques	Not applicable.	-
Solving problems	By correctly identifying and removing wool contamination.	2
Using technology	Not applicable.	-

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What should wool classers directions relate to in this standard?

Wool classers directions should relate to rate of work, tasks involved in preparing wool and should be consistent with commercial standards and requirements relevant to the enterprise.

What types of crutchings may be included in this standard?

Crutching may include wiggling, ringing and britch crutching.

What impurities may be encountered?

Impurities and contaminants may include lamb pouches, black fibres, loose woolpack fibres, dags, grease locks, or skin pieces. Wool may also be maggot or dermatitis affected, or it may be stained by urine, water or dung. There may be baling twines, man-made fibres and clothing, or excessive vegetable matter contained in the wool.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in preparing non-fleece wool requires evidence that the various parts of a fleece can be separated and located in the appropriate bins or tables within the timeframes required by the shearing operation.

The skills and knowledge required to prepare wool must be transferable to a different work environment. For example, differing sheep breeds and procedures from one property to another.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- principles and requirements of wool processing
- principles of wool growth
- identification of fleece parts, skirtings, locks, crutchings, and stains
- recognition of contamination
- recognition of wool faults
- identification of impurities
- identification of stain
- identification of oddments
- methods of handling fleece that minimise risk to own health, including safe lifting and bending techniques.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills are the ability to:

- accurately skirt fleeces at commercial rates
- skirt and roll fleeces safely
- interpret verbal and visual signals within the wool shed given by the supervisor, the wool classers and the shearers.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3143A**Monitor intensive livestock production growing environments****Unit Descriptor**

This competency standard covers the process of monitoring intensive livestock production growing environments. This includes the monitoring the health and welfare of livestock, the growing environment, and the feeding systems.

Work is likely to be under limited supervision from others, with checking only related to overall progress. The monitoring of intensive livestock production equipment and growing environments are usually performed according to enterprise guidelines and within established routines, methods and procedures. Some discretion and judgement may be required depending on what type of system is to be monitored.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Monitor livestock health and welfare	1.1 Workplace information is interpreted and clarified with the supervisor. 1.2 Growth rate of livestock is assessed against targets set in the production plan. 1.3 Animals are assessed for overall health and welfare according to enterprise procedures.
2. Monitor the growing environment	2.1 Environmental parameters are monitored according to the production plan and adjustments made as required. 2.2 Hygiene and welfare procedures are monitored and adjusted according to enterprise guidelines. 2.3 Disposal of waste and debris is monitored to ensure it follows enterprise guidelines, and with due consideration of the environmental implications .
3. Monitor feed	3.1 Feed is monitored to ensure the correct diet is offered to livestock for optimum growing conditions according to enterprise procedures. 3.2 Feed is monitored to ensure fresh palatable feed is available to livestock according to enterprise procedures.
4. Perform routine maintenance checks	4.1 All buildings and structures are inspected and checked for wear and tear. 4.2 Equipment for delivering water and feed is checked according to enterprise guidelines. 4.3 Equipment controlling the atmospheric environment is checked according to enterprise guidelines. 4.4 OHS hazards are identified, risk assessed and suitable controls implemented according to enterprise guidelines.
5. Complete monitoring activities	5.1 Any significant problems are reported to the manager and/or owner operator. 5.2 All checks are recorded according to enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information and ideas may need to be communicated to the manager and/or owner operator if faults are found in growing environments.	2
Collecting analysing and organising information	Information may need to be collected, analysed and organised when testing and recording results on livestock health.	2
Planning and organising activities	Activities may need to be planned and organised according to enterprise guidelines.	2
Working with others and in teams	Team work may need to be applied when testing and adjusting environmental parameters.	2
Using mathematical ideas and techniques	Mathematical ideas and techniques may need to be applied when testing and adjusting feeding and watering equipment.	2
Solving problems	Problem-solving skills may need to be applied to deal with poor growth of livestock and problems	2
Using technology	The use of technology may be applied when maintaining the water quality in a recirculating hydroponic system.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work context.

What workplace information may be relevant to this standard?

Workplace information may include the production plan, standard operation procedures (SOP), industry literature, manufacturers specification, MSDS, product labels or verbal instruction from the manager or supervisor, and codes of practice.

What environmental parameters are likely to be monitored?

Environmental parameters may include temperature, light, air movement and humidity.

How can environmental parameters be adjusted?	Adjusting environmental parameters may include using fans, heaters, opening and shutting louvres and windows, using misters, and artificial lighting.
What hygiene procedures may be adjusted to minimise or control contamination?	Hygiene procedures may include washing tools and equipment after use, cleaning shoes and hands before entering work areas, maintaining good ventilation in growing areas, removing diseased or dead livestock promptly, cleaning/sanitising facilities, tools and equipment, preventing contamination of feed, and ensuring potable water is available to livestock.
What environmental implications may be considered when maintaining intensive growing systems?	Environmental considerations may include the safe disposal of chemical containers or left over chemicals, the run off from the washing and cleaning of tools and equipment, disposal of dead animals and debris, and the effective management of drainage of effluent.
What buildings and structures are likely to be checked?	Buildings and structures may include animal accommodation and holding structures, sheds, service buildings, pathways, fences, and sealed surfaces.
What equipment for controlling the atmospheric and root zone environments is likely to be checked?	Items of equipment may include heaters (air and water), coolers, lights, misting systems, humidifiers, exhaust fans, and air vents.
What OHS hazards may be identified in the work area?	Hazards may include hazardous chemicals; water and dust; manual handling of animals, moving equipment and vehicles, sharp tools, noise, slippery or uneven surfaces, heat, and zoonoses.
What suitable controls may be used to reduce OHS hazards?	Suitable controls may include following OHS procedures for the use and maintenance of equipment and machinery, use of protective clothing, handling and storage of hazardous substances, correct manual handling procedures, and the use and maintenance of suitable Personal Protective Equipment (PPE).

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in implementing a maintenance program for intensive livestock production growing environments requires evidence that the intensive growing environment for livestock can be maintained and monitored to enterprise requirements.

The skills and knowledge required to implement a maintenance program must be transferable to a different work environment. For example, this could include different intensive growing systems, livestock types and classes, and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard may include:

- equipment used in intensive growing systems
- environmental control mechanisms and ventilation and heating systems
- light programs
- feeding programs for different sexes, classes and types of livestock
- basic animal anatomy
- methods to analyse results of feed and water sampling
- hygiene practices and awareness
- normal behaviour of animals
- enterprise and industry codes of practice
- environmental implications of the disposal of chemicals or chemical containers and animal wastes.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These include the ability to:

- monitor livestock health and welfare
- monitor the environment.
- monitor feed systems and water supplies
- perform routine maintenance checks
- carry out routine repairs and maintenance
- use of hand held and electrical tools such as welders, grinders and drills
- sampling techniques
- complete monitoring activities.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3144A**Unit Descriptor****Prevent and treat equine injury and disease**

This competency standard covers the functions involved in preventing and treating injuries and disease in horses. It requires the regular checking of all horses on the property for signs of ill health, distress or abnormal conditions. In addition, it requires the administering of veterinary medicines to treat disease incidence as instructed. Under the instruction from the manager (or veterinary doctor), quarantine measures, vaccinations or other preventative procedures will also be completed. At the completion of the work described in this standard, disease incidence will be minimised. The work in this standard will be carried out independently within own area of responsibility.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare to treat horses	1.1 Work to be undertaken is interpreted from work program, where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the activities to ensure continued smooth operation of the process. 1.3 Tools and equipment suitable for the work to be undertaken are selected, checked and maintained if necessary. 1.4 Suitable personal protective equipment is selected, used and maintained.
2. Recognise and report common ailments	2.1 Routine and regular checks are made of horses to detect abnormal conditions . 2.2 Common ailments are distinguished through signs of distress, elevated temperatures , or skin or joint condition. 2.3 Abnormal conditions are reported to the manager (or veterinary doctor) and actions are taken under instruction and supervision. 2.4 Initial first aid procedures are carried out for horses until professional help arrives.
3. Apply disease or ailment prevention procedures	3.1 Stable/paddock quarantine procedures are carried out according to enterprise practice. 3.2 Stable hygiene practices are maintained at high levels in accordance with routine instructions. 3.3 Routine annual or outbreak stimulated vaccination of horses is carried out under supervision of the veterinary practitioner with a minimum of stress to animals. 3.4 Routine drenching and skin washing procedures are carried out to prevent or control external or internal parasites. 3.5 While handling horses, OHS hazards are continually identified, risks assessed and suitable controls implemented. 3.6 Comprehensive records of veterinary medication and treatment by other professionals are maintained for each individual animal.

4. Treat equine injury and disease	4.1 Twitches and other restraining devices are used, as required, depending upon the individual horses temperament. 4.2 Prescribed veterinary medicines are administered at correct dose, according to instructions, with minimal stress to the horse and under supervision by manager or veterinary doctor. 4.3 All handling of the horses is done within the guidelines of animal welfare codes and practices.
5. Complete hygiene and administration	5.1 All equipment used in treating horses is cleaned hygienically and stored in accordance with manufacturers specifications, organisational procedures and regulations. 5.2 All containers, leftover fluids, waste and debris from the treatments are disposed of safely, hygienically and appropriately. 5.3 All required records and documentation are completed accurately and promptly in accordance with operational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In communicating with suppliers and the horse-property network.	2
Collecting analysing and organising information	In daily horse observations.	2
Planning and organising activities	By arranging horse husbandry activities.	2
Working with others and in teams	In working with other to carry out disease prevention and treatment.	3
Using mathematical ideas and techniques	In calculating dosage and bodyweight.	2
Solving problems	When dealing with injury or disease outbreaks.	2
Using technology	In communicating and calculating.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What personal protective equipment may be relevant to this standard?	This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or facemask, and sun protection (sun hat, sunscreen).
What are some abnormal conditions?	Abnormal conditions include abnormal urine or manure, and absence of variation in quantity of same.
What are some life threatening ailments?	Life threatening ailments may include twisted bowel, colic, and malpresentation of foals.
What might be checked to distinguish ill health?	One might check nasal, vaginal or rectal discharge, rectal temperature, abnormal respiration, abnormal coat conditions, lameness, agitation, and kicking repeatedly.
What does the taking of rectal temperature determine?	In some establishments, the taking of rectal temperature prior to work may identify a range of preclinical symptoms of respiratory infection or other illness which would not otherwise be identified.
What behaviour or conditions might be reported?	Weaving, deprived appetite or other boredom conditions that may reflect on the health of stabled horses.
In what situations may initial first aid procedures be required?	Initial first aid procedures may be required in situations such as bleeding, or cast horses.

What actions could be taken to eliminate or minimise the OHS risk?

All working routines for horses must be carried out in line with the provisions of the Workplace Health and Safety Acts and relevant animal codes of welfare.

Relevant OHS hazards identification, risk assessment and control measures lead to safe work systems and procedures. Actions aim to:

- safe work systems and procedures
- reduce kicks, bites and crushing injuries from horses; this will include using calm and positive actions to avoid alarming stock
- for restraining horses while working on them
- handling veterinarian products safely, including vaccines, needles and syringes
- preventing infection from injured/sick stock
- safe manual handling systems and procedures

Clear communication between workers, especially when working together within a close proximity.

Selection, use and maintenance of relevant personal protective clothing and equipment.

What organisation procedures may apply to this standard?

Work procedures will be based on sound agricultural principles and practices and may include supervisors oral or written instructions, livestock production program, organisation standard operating procedures, specifications, routine maintenance schedules, work notes, product labels and Material Safety Data Sheets, manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.

What information might be recorded and reported?

Dates, times and periods of care given and readings taken, chemicals, medications and other substances used including quantities and methods, and readings from temperature gauges. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

Competence in preventing and treating equine injury and disease requires evidence of the ability to recognise common ailments, identify and report abnormal conditions, treat present equine injury and disease, and perform preventative actions such as stable hygiene practices and quarantine procedures to prevent its recurrence.

The skills and knowledge required to prevent and treat equine injury and disease must be transferable to a different work environment. For example, if competent is evident in the application of disease preventative procedures such as maintaining stable hygiene, it must also indicate competence to apply such measures across a range of horse breeds and uses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- common horse diseases
- the range of common ailments that may occur or affect horses
- the application of a range of treatments under veterinary supervision
- methods of horse handling
- environmental controls and codes of practice applicable to the enterprise
- the organisations livestock production and management plans - sound management practices and processes to minimise noise, odours and debris from the livestock operations
- relevant legislation and regulations relating to waste and environment management, animal health and welfare, and employment of staff and contractors

- the need to maximise hygiene practices and awareness
- potential hazards associated with the operation of basic tools, and equipment
- relevant State/Territory legislation, regulations and codes of practice with regard to workplace OHS, and the use and control of machinery and equipment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- handle horses and duties around them in a firm but calm, gentle and unhurried manner
- identify signs of ill health and injury or signs of abnormal or depressed appetite
- handle and restrain horses for observation and treatment as required
- complete horse health and medication records clearly, accurately and in line with established practice for such records
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function, for example:

RTE3104A - *Carry out basic dentition care procedures on horses*

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3145A

Unit Descriptor

Press wool

This competency standard covers the process of pressing wool from large clips into bales and carrying out related tasks such as branding the bales, recording bale weights and numbers, and subsequently storing the wool bales.

Responsibility for pressing operations within a team may be required. Wool pressing is usually within established routines, methods and procedures. Competency at this level requires the application of knowledge and skills to a range of wool handling and pressing duties.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for wool pressing	1.1 The lines of wool are identified and confirmed with the wool classer. 1.2 The wool press is checked for safe operation, lubricated and maintained according to the manufacturers instructions. 1.3 The work area is assessed as free of all contaminants in readiness for pressing. 1.4 Supplies of wool packs, bale fasteners and hooks, stencils and bale-branding inks are ascertained and located in appropriate place. 1.5 Recording system required by the enterprise and wool classer is identified. 1.6 Scales to be used are checked for accuracy and calibrated if necessary. 1.7 The press and its location are checked for safety, and all other OHS requirements are adhered to. 1.8 Any defective equipment is identified and reported to the appropriate person.
2. Press wool	2.1 All bending and lifting is done according to safe working practices and using the available safety equipment. 2.2 Contamination is removed from the woolpack and placed in the appropriate location. 2.3 Woolpacks are checked for conformity with current industry standards. 2.4 Directions for order of pressing and any special requirements are sought from the wool classer. 2.5 All wool is placed correctly and evenly in the press to produce even density bales. 2.6 Bales are pressed safely for weight and length according to industry standards and organisation requirements. 2.7 Wool flow and build-up in bins is monitored. 2.8 Wool classer is consulted to ascertain mob cut outs and pressing requirements. 2.9 Lines are pressed to avoid mixed bales. 2.10 Work area is maintained in a condition that avoids contamination of the wool. 2.11 Pressing is carried out according to the time restrictions and workflow of the wool room.

- 3. Close and stack bales
 - 3.1 Approved bale dividers are used according to instruction, and flaps are correctly fastened according to industry standards.
 - 3.2 Bales are identified for branding before removing them from the press.
 - 3.3 All lifting required is done according to safe working practices and using the available safety equipment.
 - 3.4 Bales are stored safely, avoiding injury to presser, risk to other workers, and damage to bales and equipment.
 - 3.5 Bales are stored to maximise shed space and to avoid weather damage.
- 4. Complete recording requirements
 - 4.1 Bales are branded according to industry standards and organisational procedures.
 - 4.2 Bales are weighed according to industry standards and organisational procedures.
 - 4.3 Bale weights, numbers and descriptions are clearly and accurately recorded using the appropriate **recording system**.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By effective communication, and verbal or hand signals with shed hands, the wool classer and person in charge.	1
Collecting analysing and organising information	Information regarding sheep numbers and wool flow may be accessed and applied	1
Planning and organising activities	To press, bale and brand wool within time constraints and in conjunction with other workers.	1
Working with others and in teams	To maintain continuous workflow in shed.	1
Using mathematical ideas and techniques	To tally work completed, and to estimate and record bale weights.	1
Solving problems	In determining when there is sufficient wool quantity in bins and when satisfactory bale weight has been achieved.	1
Using technology	By using wool presses and scales.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What wool press types may be used for this standard?

The press may be hydraulic, manual, self-pinning, or electric.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- the operation and maintenance of hazard-free facilities and equipment, including hydraulics and guarding of exposed moving parts, particularly wool presses
- safe manual handling, including lifting and carrying. Height restrictions may apply to bale stacks
- protection from electrical hazards, hazardous noise and organic and other dusts
- appropriate use of personal protective equipment and clothing.

Consideration of OHS issues for this standard may also include consideration of any national codes of practice in the industry.

Who might the appropriate person be?

Reporting and confirmations will be to the person in charge of the operation who may be a supervisor, classer, owner, manager, or broker.

What is the contamination to be avoided?

Amongst the contaminants are lamb pouches, maggot affected wool, urine stains, dung stains, skin pieces, black wool, loose woolpack fibres, baling twines, man-made fibres and clothing, dermatitis, branding dyes, dags, grease locks, burrs and vegetable matter, shed debris, wet wool or water stains.

What recording system might be in use in the wool room?

The system may be manual or digital, and could use a wool book.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence that bales are evenly packed and pressed, and branding is clear and accurate.

The skills and knowledge required to press wool into bales must be transferable to a different work environment. For example, across the range of fleece types, clip sizes and wool press technologies.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below.

A sound working knowledge of:

- sources of contamination of the fleece, and other aspects of the quality management systems in place in the organisation
- methods of handling fleece and bales that minimise risk to own health, including safe lifting and bending techniques
- industry standards for weight, length of bales and type of pack
- industry standards for bale branding
- the recording system for bale details in use in the organisation.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- observe and report on OHS hazards and risks
- operate different types of wool presses and carry out basic lubrication and maintenance according to manufacturers instructions
- operate the various types of scales and manual handling devices
- check woolpacks and wool to ensure freedom from contamination
- assess and monitor wool-flow and build-up in bins
- maintain uniform bale weights for each line
- brand bales clearly and accurately
- handle and stack wool bales efficiently and without risk to self, other people, or machinery
- record bale information to be interpreted and used by other people.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3146A**Unit Descriptor****Process and store semen**

This competency standard covers the process of storing and processing semen collected from livestock for the purpose of artificial insemination. The work is performed under limited supervision and with reference to established procedures. Some discretion and independent judgement is required.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare diluent	1.1 Containers to be used for preparation of diluent are cleaned according to enterprise hygiene standards. 1.2 Equipment and tools to be used in processing semen are calibrated according to manufacturers' specifications. 1.3 Distilled water for use in diluent is heated to required temperature. 1.4 Distilled water is added to powdered diluent in correct proportions. 1.5 Diluent is correctly stored before use.
2. Determine number of doses	2.1 Concentration of the ejaculate is determined using spectrophotometer or other appropriate equipment. 2.2 Number of doses is calculated according to the concentration determined.
3. Assess quality of semen batch	3.1 Semen batch is examined and checked for contamination. 3.2 Motility of semen is assessed. 3.3 Quality of semen batch is compared against enterprise benchmarks. 3.4 Poor quality semen is discarded according to enterprise procedures.
4. Ensure incubator is operational	4.1 Temperature and other operational parameters of incubator are checked before use. 4.2 Problems with incubator are reported to supervisor and/or resolved before proceeding.
5. Prepare doses	5.1 Diluent is added to semen batch. 5.2 Diluted semen is divided into doses. 5.3 Each dose is labelled . 5.4 Doses are placed in incubator. 5.5 Quality of doses prepared is assessed.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Reporting to supervisor about problems encountered with batches of semen being processed.	1
Collecting analysing and organising information	Collecting details about donor sire and the quality of the semen batches.	1
Planning and organising activities	Sequencing of processing activities and preparation of incubators to ensure correct temperature is maintained.	1
Working with others and in teams	Working as a team undertaking processing and storing activities.	-
Using mathematical ideas and techniques	Calculation of volume and concentration of semen batches.	2
Solving problems	Identifying problems with semen batches and/or equipment being used and determining appropriate course of action (e.g. discard batch).	2
Using technology	Use of incubator and spectrophotometer, personal computer to record details.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What might semen be examined for?

Donor sire identity, viability, extension, sperm count, abnormalities, contamination.

What are the key considerations when extending or diluting semen?

The viability of the semen, individual donor sire characteristics, nature of the semen - chilled or fresh.

What information should be included on the dose label?

The ID number of the sire animal and the date of processing must be recorded.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in processing and storing livestock semen requires evidence that semen batches have been checked for suitability and quality, and have been correctly diluted or extended and stored under the required conditions.

The skills and knowledge required to prepare the display must be transferable to a different work environment. For example, processing and storing semen of different livestock species.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- temperatures required for storing of diluent and processed semen doses
- quality parameters for livestock semen intended for use in artificial insemination procedures
- operation of incubator.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- operate incubator
- operate spectrophotometer
- calculate concentration and motility of semen batch.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3147A**Prepare for and implement natural mating of livestock****Unit Descriptor**

This competency standard covers the process of preparing for and implementing natural mating procedures for livestock.

Preparing for and implementing natural mating procedures is likely to be under limited supervision from others, with checking only related to overall progress. Work is likely to be performed in accordance with an established natural mating program or plan (i.e., seasonal or continuous mating). The work requires the application of livestock knowledge and a broad range of animal handling and husbandry skills. The work is usually done within routines, methods and procedures where some discretion and judgement are required in the organisation of work, and the achievement of outcomes within time and other constraints.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare paddocks or yards	1.1 Particular livestock mating plan is determined according to supervisor instructions or enterprise procedures. 1.2 Paddocks or yards are selected and stocked to appropriate levels. 1.3 Predator control program is planned and implemented where appropriate. 1.4 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.5 Suitable safety and personal protective equipment (PPE) is selected, used and maintained.
2. Prepare dams for joining	2.1 Live weight of dams is monitored through weighing and/or condition scoring. 2.2 Nutrition levels are adjusted to meet increased levels in line with feeding strategy. 2.3 Dam health and husbandry operations are carried out according to enterprise procedures. 2.4 Mobs are drafted for joining.
3. Prepare sires for joining	3.1 Physical examination of sires is carried out prior to joining. 3.2 Veterinary advice is sought where appropriate. 3.3 Mating ratios are determined. 3.4 Replacement sires are selected in time to allow adjustment to new environment. 3.5 Sire health and husbandry operations are carried out in line with individual requirements. 3.6 Sires environment is managed for optimum mating performance.

- 4. Join sires to dam mobs
 - 4.1 If appropriate, dates are selected for joining according to the mating plan.
 - 4.2 Test joinings for new sires are undertaken if appropriate.
 - 4.3 Sires are introduced to herds or individual dams to ensure good contact.
 - 4.4 Sires are removed from herds at the scheduled time if in line with enterprise requirements.
- 5. Monitor mating activity
 - 5.1 Mating activity is observed and **recorded** in line with enterprise standards.
 - 5.2 Distribution of sires is observed within each mob.
 - 5.3 **Remedial action** is taken if required.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	When communicating with livestock suppliers and other property personnel involved with the natural mating program.	1
Collecting analysing and organising information	Information may be collected on previous mating and breeding performance and compared with the success of the current program	1
Planning and organising activities	Paddocks and yards are prepared and sires and dams are readied for the program.	2
Working with others and in teams	Team work will be required to ensure mating targets are reached.	2
Using mathematical ideas and techniques	Mathematical ideas can be applied when calculating mating percentages, selection indices, etc.	1
Solving problems	Typical problems that may need to be resolved include poor conception rates or nutrition, and difficulties with paddock or yard selected.	2
Using technology	Technology can be used to observe, communicate and keep records of the mating program.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What livestock may be covered by this standard?	Sires may include bulls, rams, billy goats, bucks and stallions. Dams may include cows, ewes, does and mares.
What is included in a mating plan?	A mating plan may include matching sire animal to dams, either singly or in mobs/herds, time of joining and duration, identifying sire joining percentages, nutrition of sires prior to mating, breeding selection, and individual mating.
What actions could be taken to eliminate or minimise the OHS risk?	Relevant OHS hazards identification, risk assessment and risk control measures, such as: • safe operating procedures • safe manual handling systems and procedures • safe systems and procedures for outdoor work, including protection from solar radiation • safe livestock handling systems and procedures, including zoonoses control measures (Q Fever) and safe handling of sires • selection, use and maintenance of relevant personal protective equipment. All animal handling and treatment must be carried out in line with the provisions of the Workplace Health and Safety Acts and relevant animal codes of welfare.
What personal protective equipment may be relevant to this standard?	This may include boots, helmet, overalls, gloves, protective eyewear, and sun protection (sun hat, sunscreen).
What is the critical dam weight?	Critical dam weight is the live weight below which there may be significant failure of mating/gestation and poor survival rates of newborn animals.
What health checks or treatments might be carried out before implementing the natural mating program?	Animals selected for natural mating may be treated by drenching for worms, vaccinations, lice and/or tick control, and feeding supplements. Sires physical examination may include a check of the scrotum, prepuce, feet, testes, penis, legs, and eyes.
What factors need to be considered in the sires environment?	The sires environment may be affected by overheating, competition between sires, mustering to improve contact, level of nutrition, and adequacy of water supply.

What information needs to be recorded about the mating program?

Mating records may include joining percentage, date sires joined and removed, health status of sires, paddock records, sire identification, seasonal records (rainfall, temperature), and bodyweights

What remedial action might be required?

Remedial action may include providing replacement sires, extending the joining period, providing supplementary feeds, providing shade, shelter or water, and treating for lice or other parasites.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence that animals and the mating environment are prepared appropriately according to the requirements of the species and the enterprise, and that the animals performance is monitored to ensure successful joining.

The skills and knowledge required to undertake the function must be transferable to a different work environment. For example, implementing natural mating program for different animals such as beef cattle or goats, or in different climatic regions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- mating behaviour of sires and dams
- optimum live weights and condition for mating
- environmental influences on joining.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills are:

- managing dams and sires during joining
- preparing dams and sires for joining
- monitoring joining activity
- keeping records.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3148A**Unit Descriptor****Assess conformation of horses**

This competency standard covers the functions required to assess conformation of horses.

It requires the application of skills and knowledge to identify desirable and undesirable conformation in horses and to report on conformation using standard conformation terminology. Assessing conformation also includes reporting on the horse unsoundness, blemishes, the way of going and vices. The work in this standard is likely to be carried out as part of a team or independently.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Objectively assess a horse's conformation	1.1 Conformation of horse is reported on using standard conformation terminology. 1.2 Desirable conformation of a horse is reported on using standard conformation terminology. 1.3 Occupational health and safety hazards are continually identified while handling horses, risks assessed and suitable controls implemented.
2. Assess unsoundness and blemishes in the horse	2.1 Unsoundness and blemishes of the fore limbs are identified and reported. 2.2 Unsoundness of the hind limbs are identified and reported. 2.3 Unsoundness and blemishes of the hooves are identified and reported. 2.4 General unsoundness and blemishes are identified and reported.
3. Report on the way of going of horses	3.1 Essential elements of the way of going of the horse are identified and reported on. 3.2 Natural gaits of the horse are identified and reported on. 3.3 Defects in the way of the going of the horse are identified and reported on.
4. Report on the undesirable vices and habits of horses	4.1 Vices dangerous to people are identified and reported on. 4.2 Vices dangerous to horses are identified and reported on.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Communicate to other team members the type of assistance required when assessing conformation of the horse. Reporting assessment outcomes back to supervisors or other relevant persons.	2
Collecting analysing and organising information	Information regarding horse conformation is collected, analysed and organised.	3
Planning and organising activities	Conformation process should be planned and organised.	3
Working with others and in teams	A team approach may be used when assessing horses conformation.	2
Using mathematical ideas and techniques	Mathematical techniques may be used to calculate volume and percentages. Measurement will be used in assessing horse conformation.	2
Solving problems	Problem solving may be used when administering the process of assessing the horses conformation.	2
Using technology	Technology may be used to source and communicate information and in the process of assessing conformation of the horse.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What characteristics may be assessed when assessing conformation of the horse?

Overall conformation, balance, conformation in relation to purpose, height, head (forehead, eyes, ears, nostrils, jaw, teeth), neck, chest (barrel), back, loin, hindquarters and tail carriage; forelimbs - tendons, wither, shoulder, upper arm, forearm, cannon, pastern; joints of the forelimb - elbow, knee (carpus), fetlock, pastern, coffin; hindlimbs - tendons, femur, gaskin, cannon, pastern; joints of the hindlimb - hip, stifle, hock, fetlock, pastern, coffin; feet, colour, action and way of going, blemishes, vices, limb deviations.

What may some desirable conformation features include?

Head should show desirable breed sex characteristics, alert carriage of head and ears, strong, smoothly arched neck, level back with short, strong coupling, croup of sufficient length and neatly turned to give the animal a balanced appearance, well-muscled quarters, straight strong legs with ample bone, superior action, strong full chest and breast with proper slope of shoulder, long gently sloped pasterns.

What OHS requirements may be relevant to this standard?

Relevant occupational health and safety hazards identification, risk assessment and risk control measures:

- Calm and positive actions at all times when handling horses in minimising the risk of kicks or bites from frightened or escaping animals.
- Manual handling Codes of Practice should be strictly observed.
- Awareness of the constant workplace hazard of kicks, bites and crushing from horses
- Safe working practices, including the need to communicate proposed actions with horses to all personnel in close proximity to avoid accidents.

All procedures must be carried out in compliance with the provisions of the Workplace Health and Safety Acts, their regulations and the relevant Codes of Practice.

How may the horses natural gait be determined?

Observation of the horse walking and trotting. When conformation is assessed as part of a team, the horse handler may move the horse directly towards the person carrying out the conformation assessment. By doing this the assessor can determine what type of action the horse has and also if it is lame.

Horses with good action should move their legs straight and true with a spirited snappy movement. Horses that 'plait' their front legs have undesirable structure, as do horses that 'paddle' with their front legs.

What vices may a horse exhibit?

Pacing, chewing, bucking, rearing, cribbing, wind sucking, weaving, rug tearing, eating bedding, shying, bolting, walking away when being mounted.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to assess conformation of horses. It also requires the ability to identify vices, blemishes in horses and identify natural gaits and the horses way of going. Competence in safe horse handling techniques should also be demonstrated. Evidence must also be demonstrated in the implementation of safe workplace and positive environmental practices.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- Relevant occupational health and safety legislation, regulations and codes of practice.
- Recognise and report on desirable and undesirable conformation using accepted conformation terminology .
- Recognise and report on common vices in horses.
- Safe horse handling techniques.
- Recognise and report on desirable and undesirable natural gaits.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- handle horses safely
- maintain accurate data documentation
- identify horse conformation
- communicate effectively with staff.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function, for example:

RTE2148A Handle young horses

RTE4106A Supervise raising young horses

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3149A
Unit Descriptor**Supervise free-range poultry operations**

This competency standard covers the process of planning and scheduling activities and operations for a free-range poultry organisation. It includes considering the environmental impacts of raising poultry in a free-range situation, as well as monitoring the production and the health and welfare of the birds. Successful implementation of the work described in this standard results in a production system which anticipates difficulties and handles them according to welfare practices.

This standard applies to all poultry species and breeds produced in a free-range environment.

Supervising free-range poultry operations is likely to be undertaken with only general guidance. This unit depends upon application of knowledge including poultry dietary, nutritional, and other health requirements. It requires skills to assess and analyse a range of plans and reports as well as to identify the symptoms of ill health given the seasonal conditions.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Plan free-range poultry operation	1.1 Accommodation construction is selected that complies with food safety, animal welfare and biosecurity codes of practice, environmental practice and cost benefit. 1.2 Number of birds per unit of space for grazing/pasture is in line with industry and animal welfare codes of practice. 1.3 Number of birds per unit of space in the shed is in line with industry and animal welfare codes of practice. 1.4 Method of managing poultry in a free-range environment is selected. 1.5 Feeding strategy, is based on animal health and welfare, industry QA standards and codes of practice, cost benefit analysis, and production requirements. 1.6 Method of managing and monitoring bird health and disease is determined in line with industry QA standards and biosecurity code of practice. 1.7 Strategies for protecting poultry from predators are devised suitable to the birds under production and the constraints of the property in line with the animal welfare and biosecurity codes of practice. 1.8 Strategies for managing pasture are prepared and schedules for monitoring them are devised in accordance with standard industry pasture management practices. 1.9 Enterprise plan for production is developed and documented in line with industry QA program, state and Commonwealth legislation, codes of practice. 1.10 An enterprise environmental plan is prepared to meet enterprise, industry and regulatory requirements. 1.11 OHS hazards are identified, assessed, and risk management implemented. 1.12 Any approvals that are required for the operations are identified, sought and obtained. 1.13 Measurable indicators, specifications and targets are determined, based on the production/management plan. 1.14 The plan and its performance indicators are clearly articulated and documented.

2. Determine scheduling and key responsibilities
 - 2.1 **Accommodation construction** is selected that complies with food safety, animal welfare and biosecurity codes of practice, environmental practice and cost benefit.
 - 2.2 Number of **birds** per unit of space for grazing/pasture is in line with industry and animal welfare codes of practice.
 - 2.3 Number of birds per unit of space in the shed is in line with industry and animal welfare codes of practice.
 - 2.4 Method of **managing poultry** in a **free-range** environment is selected.
 - 2.5 **Feeding strategy**, is based on animal health and welfare, industry QA standards and codes of practice, cost benefit analysis, and production requirements.
 - 2.6 Method of managing and monitoring **bird health** and **disease** is determined in line with industry QA standards and biosecurity code of practice.
 - 2.7 **Strategies for protecting** poultry from **predators** are devised suitable to the birds under production and the constraints of the property in line with the animal welfare and biosecurity codes of practice.
 - 2.8 Strategies for managing pasture are prepared and schedules for monitoring them are devised in accordance with standard industry pasture management practices.
 - 2.9 **Enterprise plan for production** is developed and documented in line with industry QA program, state and Commonwealth legislation, codes of practice.
 - 2.10 An enterprise environmental plan is prepared to meet enterprise, industry and regulatory requirements.
 - 2.11 **OHS hazards** are identified, assessed, and risk management implemented.
 - 2.12 Any **approvals** that are required for the operations are identified, sought and obtained.
 - 2.13 Measurable indicators, specifications and targets are determined, based on the production/management plan.
 - 2.14 The plan and its performance indicators are clearly articulated and documented.
3. Monitor free-range poultry operation
 - 3.1 **Monitoring** points outlined in the implementation plan are met.
 - 3.2 Checks are made to ensure that **OHS requirements** are being observed and followed.
 - 3.3 Checks are made to ensure that animal health and welfare requirements are being observed and followed.
 - 3.4 Checks are made to ensure that site **environmental requirements** are being observed and followed.
 - 3.5 Checks are made to ensure that **food safety requirements** are being observed and followed.
 - 3.6 Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress.
 - 3.7 Checks are made to ensure that the **documentation** required by the organisation, or other regulating bodies, is completed clearly and accurately.
 - 3.8 Where any corrective action or amendment to the plan is required, the action is initiated and taken.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By clearly explaining to staff, and/or contractors, the purpose, requirements, and processes to be used during the operation.	3
Collecting analysing and organising information	In gathering and analysing the organisations plans for poultry production as input to the implementation plan.	2
Planning and organising activities	By scheduling for the people, materials, and equipment to be in the right place at the right time.	3
Working with others and in teams	In using staff for jobs requiring help such as nest cleaning and top-ups.	3
Using mathematical ideas and techniques	In calculating rates of lay, mortalities, hen day percentage and number of birds per unit space in sheds and for grazing/pasture.	3
Solving problems	In managing phenomena such as poor egg shell quality and soiled eggs.	2
Using technology	In operating any necessary equipment prior to, and during, the control operations - communication technology, calculating equipment, measuring equipment, word processing/ spreadsheeting software.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What aspects of the accommodation construction would be considered?

The design, airflow, materials used, internal layout of shed, site selection, space requirements per bird.

What birds may be under production in this unit?

Birds may include chickens, ducks, geese, quail, turkeys, pheasants and guinea fowl.

Free-range environments may be used to produce eggs and meat and may also produce feathers, down and manure as by-products.

How might poultry be managed in a free-range environment?

Poultry need to be managed in accordance with enterprise plan, state or territory and Commonwealth legislation, codes of practice, industry QA program, marketing requirements

What does free-range mean?	Poultry has access to shed outside environment for set periods of time daily. Poultry may share fields and have access to non-commercial feed sources, such as grass, forage.
What might be included in the feeding strategy?	Poultry need to be fed in accordance with their physiological requirements to comply with animal welfare code of practice. Feed may be provided from commercial products, and from pasture,. Climate, soil type and topography will determine pasture species.
How might bird health be managed?	Bird health management may include vaccinations, beak trimming, and other methods which comply with biosecurity and animal welfare codes of practice and state and Commonwealth legislation, industry QA programs and enterprise plan.
How might disease be managed?	Disease may be managed by keeping brooding areas and equipment cleaned and sanitised, placing fresh litter, personnel and equipment not cross-contaminating and ensuring that quarantine is in place. Grazing cycles would also be considered.
What strategies for protecting poultry might be employed?	Protection strategies may include the use of ultrasound protection, electric and other fences, and guard dogs.
What are the likely predators of poultry?	They include foxes, birds of prey, feral dogs, and feral cats.
What policies and procedures for production might be developed?	They might cover: <i>Egg cleaning</i> which will require that eggs will be dry cleaned and washed according to the national Model Code of Practice for Shell Egg Production, Grading, Packing and Distribution. <i>Hazard Analysis programs</i> which will cover biosecurity, animal welfare and food safety codes of practice, and industry standards. This may include preventative health programs covering known threatening poultry pathogens, monitoring for insecticide and soil residues in products, monitoring for infections of human health significance, product identification and withdrawal programs, administration of medications, egg collection, hygiene and storage and records of production. <i>Hazard Analysis maintenance</i> which will cover records to support HACCP program, checks of hazard program to verify adherence to standards and demonstration of compliance with food safety, animal welfare and biosecurity requirements .

What are the detrimental environment impacts that would be avoided?	Suitable planning and appropriate decisions will avoid, or minimise, impacts such as wind erosion, removal of topsoil, the development of acid sulphate soils and increased water run-off speeds.
What are the OHS hazards that might exist?	Hazards might arise from the operation of machinery and vehicles, organic and other dusts, hazards associated with rearing and handling poultry and the hazards associated with storing handling, and transporting hazardous substances. Needle stick injuries with injectable vaccines may cause severe tissue reactions in humans.
What approvals might be required, and from where might they be obtained?	The approvals may be those that are required by the Environment Protection Act, environmental agencies regulations, duty of care, occupational health and safety legislation, site regulations and procedures, statutory requirements, or traditional land owners requirements. Such approvals may be obtained from the various authorities that implement the associated regulations, or agencies that operate on their behalf.
What might affect scheduling of previous processes?	Timing is planned to suit such items as the transport of birds, vaccination schedules, and the organisation's resourcing situation.
What recordkeeping systems might be in place?	They may be either paper-based or digital, and information will be recorded into logbooks or other records. The types and detail of recordkeeping in the organisation should also be specified.
What actions will require documentation?	Documentation should be in accordance with the enterprise plan, industry QA program and relevant legislative requirements.
What monitoring may occur?	Salmonella culturing in faecal droppings, performing work counts, performing post-mortems, investigating unexplained mortality, collecting and interpreting serology results.
What OHS requirements relate to free-range poultry management operations?	Actions that will reduce the occupational health and safety risk include: • selection, use and maintenance of personal protective equipment • appropriate and responsible servicing of equipment and vehicles • use of safe manual handling systems • protection from both noise and dusts.

What environmental requirements relate to free-range poultry management operations?

Work practices, such as the appropriate and responsible disposal of waste material, trash, effluent, and the methods selected for pasture management.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in managing free-range poultry operations requires evidence that poultry are profitably reared and managed according to state/territory and Commonwealth legislation, codes of practice, industry QA and enterprise plan.

The skills and knowledge required to manage free-range poultry operations must be transferable to a different work environment. For example, across a range of breeds and birds produced for both meat and eggs.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard include:

- environmental controls and codes of practice
- poultry diseases including zoonoses
- animal welfare code of practice and industry standards
- biosecurity code of practice and industry standards
- food safety code of practice and industry standards.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- identify the conditions which affect poultry management and development
- recognise common diseases, of poultry such as coccidiosis, Mareks disease, infectious bronchitis, chronic respiratory disease
- recognise normal bird behaviour
- collect, record and assess data and information required according to specific criteria
- complete data, quality control and other documentation clearly and accurately
- read and act on written information including plans, maps, plans and reports
- read and interpret laboratory reports informing of health status
- interpret soil tests
- provide and interpret data, costings and calculations relating to time, financial information, weights, volumes, and lengths
- construct hazards tables and prepare other reporting requirements
- explain, and deliver instructions about, the plans and scheduling of the operations to both staff and contractors.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3210A

Unit Descriptor

Plan and construct an electric fence

This competency standard covers the functions required to plan, construct and maintain an electric fence in a rural enterprise.

It requires the application of skills and knowledge to identify and incorporate the topographical features of a property into an efficient and cost-effective fencing plan for construction. An awareness of workplace safety associated with electric fencing is also required. The work is likely to be carried out under routine supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Determine electric fencing requirements	1.1 Fencing requirements are assessed according to property maps, legislative requirements and enterprise objectives. 1.2 Equipment, materials and labour requirements are determined, and estimated costings are maintained within budgetary constraints. 1.3 Alternative electric fencing options are determined and compared to ensure cost-effectiveness. 1.4 Plan is prepared giving consideration to siting fences in relation to natural features and proposed uses.
2. Prepare for construction	2.1 Work plan is accessed and clarification sought where required. 2.2 Tools and fencing equipment are arranged, and safely and efficiently transported to the work site. 2.3 Labour requirements are arranged and confirmed according to enterprise requirements. 2.4 Potential and existing hazards in the workplace are risk assessed and minimised according to OHS requirements.
3. Construct electric fence	3.1 Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements. 3.2 Energiser is installed according to manufacturers specifications, OHS and enterprise requirements. 3.3 Electric fence is constructed according to work plan, OHS and enterprise requirements. 3.4 Gates are attached and appropriately positioned for correct operation and function according to work plan. 3.5 All work is carried out safely according to OHS and enterprise requirements.

4. Complete fencing operations
 - 4.1 Fencing is checked for correct **installation** and **performance**.
 - 4.2 Electric fence **faults are identified and rectified** according to manufacturers specifications, OHS and enterprise requirements, and level of complexity.
 - 4.3 Work site is **cleared and tidied** and all waste is disposed of in an environmentally responsible manner.
 - 4.4 Tools and fencing equipment are transported safely from the work site and **checked** and stored according to manufacturers recommendations and enterprise requirements.
 - 4.5 Relevant information is recorded and maintained according to enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to fencing requirements and planning may be sourced from management and the property network.	1
Collecting analysing and organising information	Information with regard to the type of fencing, siting details and resource requirements may be prepared and included in a plan.	1
Planning and organising activities	Activities involving the purchasing of materials and arranging their transportation to worksite may be planned and arranged prior to work schedule.	1
Working with others and in teams	In the application of methods and procedures to construct electric fencing according to plan within timeframes.	1
Using mathematical ideas and techniques	Basic mathematical techniques may be applied in quantity surveying, costing alternatives and measuring and drafting.	1
Solving problems	Problems of topography, stock pressures or location of gates may be solved by revising and making changes to the fencing plan.	1
Using technology	Technology may be used to communicate, process information and assist in construction processes.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What may be identified in fencing requirements?	This may include types of fencing and the purposes for which it is to be used.
What legislative requirements may be relevant to this standard?	This may include industry standards and codes of practice with regard to safety protocols, radio, television and radio interference, and the placement of caution signs. It may also include not using barbed wire, overhead wires or wires at head height, or electric fencing where it is likely to be touched by children, and especially near property dams and swimming pools.
What equipment and materials might be used?	Tools may include post driver, post hole borer, wire strainers and fencing pliers, wire cutters, wire spinners, shovel, crowbar/rammer, brace and bit, drill, earth stakes, and cut out switches. Wire may include live wire, earth wire and electric ribbon tape.
What information may be included for consideration in a fencing plan?	This may include the type of materials required and costs, stocking pressures and type of stock control required, soils, topography, water, paddock shape, machinery use, and access.
What information may be included in a work plan?	This may include designated work tasks, allocated tools and equipment, materials requirements, procedures for pre-start and safety checks of tools and equipment, timeframe for work completion, managers instructions, and reporting requirements.
What may be involved in the efficient transport of tools and equipment?	This may involve methods and procedures to minimise possible damage or loss to tools, equipment and personnel.
What enterprise requirements may be applicable to this standard?	SOP, industry standards, production schedules, MSDS, work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.
What existing and potential hazards may be relevant to this standard?	This may include exposure to hazardous noise, dust solar radiation, and adverse weather conditions. It may also include electricity associated with powered tools, portable live posts and energisers.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- the use of fencing tools and materials
- the operation of vehicles
- hazard and risk control
- lifting, carrying and handling techniques - particularly with regard to electric fence components
- manual handling, especially when handling posts and coils of wire
- the use of personal protective equipment
- outdoor work including protection from solar radiation
- protection from dusts
- administering first aid.

What personal protective equipment may be relevant to this standard?

This may include boots, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection.

What may be involved in the construction of an electric fence?

This may involve the installation of strainer assemblies and posts, tensioning and terminating line wires, fitting post insulators, and using effective knots for joining and tying off wires to avoid short circuits.

When might gates be determined as operating correctly?

Gates are attached to a gatepost, hung, swung and secured for closure.

What may be involved in the installation of electric fence?

Earth stakes are appropriate to the energiser, good connections exist between the earth stakes, energiser and earth return wire (if used), and a voltmeter is used to check whether intermediate earth is needed along a fence line.

What may be involved in checking the performance of an electric fence?

This may involve ensuring first that the energiser is connected tightly to the correct output terminals and earth stakes are appropriate to the energiser. Fence voltage is tested with a voltmeter and readings are accurately interpreted in terms of the energisers output and required stock control. The system would also be monitored regularly for current leakage and short circuits.

What may be involved in identifying and rectifying faults?

By making conductivity levels compatible with energiser, isolation of faulty sections, finding damaged line, or seeking assistance when a critical fault cannot be detected. In cases of complex faults or problems, specialist advice is sought.

What may be involved in clearing and tidying a work site?

This may involve replacing dirt, and the removal and safe disposal of waste.

What may be involved in checking tools and fencing equipment?

Tools and equipment faults or malfunctions are reported for repair or replacement according to enterprise requirements.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to develop an electric fencing plan and implement its construction. It requires the ability to access and interpret plans, arrange surveys and analyse results, calculate cost structures, obtain legal authorisations for development, provide alternative options, and carry out maintenance activities. It requires an awareness of the basic operation of electric fences and the differences between portable and mains power.

The skills and knowledge required to design, construct and maintain an electric fence must be transferable to another rural environment. For example, this could include different types of fences, locations and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- basic operation of electric fences including earthing and current flow, resistance and leakage
- difference between portable and mains power
- issues affecting electric fencing in relation to the whole property plan
- range of electric fencing designs, construction methods and materials
- dangers posed by electricity to personnel and livestock
- conditions under which electric fences may cause fire
- safe methods for diagnosing routine faults
- common electric fencing hazards and safety precautions
- relevant State/Territory legislation and regulations regarding electric fences
- OHS legislative requirements
- relevant codes of practice with regard to protection of the environment.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- draft fencing plans and specifications
- operate fencing tools and construction equipment
- mark fencing lines
- minimise environmental impacts
- read and interpret plans
- read plans
- consult and report to management
- arrange and purchase materials
- calculate and measure fencing requirements and calculate costings of fencing plan.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3301A

Unit Descriptor

Operate a cane harvester

This competency standard covers the functions required to prepare and operate a cane harvester in the sugar cane production industry.

It involves the application of skills and knowledge to correctly set-up, calibrate and operate a cane harvester to maximise sustainable cane production. It also requires an awareness of legislative requirements with regard to licensing and safe workplace practices. The work is likely to be carried out under routine supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare a cane harvester for operation	1.1 Routine pre-operational checks of cane harvester are completed to manufacturers specifications and enterprise requirements. 1.2 Cabin drill is carried out according to enterprise instructions and safety routines. 1.3 Potential and existing hazards in the workplace are recognised, risks assessed and controlled according to OHS requirements. 1.4 Suitable personal protective equipment is selected, used and maintained according to OHS requirements. 1.5 Crop class, variety and field for harvest is correctly located and selected.
2. Carry out cane harvesting	2.1 Harvester is set and operated in a safe, controlled and correct manner and monitored for performance and efficiency. 2.2 Harvester is operated in co-ordination with haul out vehicles and other associated harvesting equipment. 2.3 Cane is harvested in a productive, safe and controlled manner and correctly consigned. 2.4 Risks to self, others and the environment are anticipated and minimisation strategies implemented accordingly. 2.5 Environmental implications associated with cane harvesting are identified, assessed and reported to the supervisor.
3. Complete cane harvesting operations	3.1 Shut-down procedures for cane harvester are completed to manufacturers specifications and enterprise requirements. 3.2 Harvester is sterilised at scheduled times according to operators manual and enterprise requirements. 3.3 Records are completed and maintained according to enterprise requirements. 3.4 Malfunctions, faults, irregular performance and damage to cane harvester are identified, detailed and reported according to enterprise requirements. 3.5 Cane harvester is cleaned, secured and stored according to OHS and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information and ideas with regard to cane harvesters, their components and application be discussed with colleagues (haulage drivers and operators of associated equipment).	1
Collecting analysing and organising information	Information with regard to performance, faults and maintenance may be observed and monitored for analysis, and organised by records and reports.	1
Planning and organising activities	Activities involving maintenance and repairs to a cane harvester may be planned and co-ordinated around work schedules, or sequenced as required. Planning may also be required in working with haulage drivers and operators of other associated equipment.	1
Working with others and in teams	Team work may be applied in communication methods and procedures to complete maintenance and repairs, and to work co-operatively with haulage drivers and operators of associated equipment to ensure smooth harvesting operations.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calculation and measurement of harvest feed rates and maintain the flow of empty bins for harvested cane.	1
Solving problems	Contingencies for changed or difficult operating conditions or to control spillage might need to be identified and planned for.	1
Using technology	To access, communicate, measure and record information with regard to maintenance, usage and performance of the cane harvester and to job requirements.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What may be involved in routine pre-operational checks of cane harvesters?	This may include pre-start and safety checks of engine cooling systems, mechanical drives including belts, and hydraulic and electrical systems.
What range of cane harvesting vehicles may be operated?	Harvesters may be track, half-track or wheel cane harvester, and double row cane harvester.
What enterprise requirements may apply to this standard?	Standard operating procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDS), work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.
What might be involved in a cabin drill?	Checking to ensure that all controls are operational and in correct position; also checking gauges, warning devices and controls for correct operation.
What hazards may be encountered in the workplace?	Hazards may include exposure to loud noise and fumes, hazardous substances, solar radiation, organic and other dusts, and airborne cane trash. It may also include ergonomic hazards associated with posture and mechanical vibration. Other hazards may include venomous animals (including snakes and insects), difficult terrain and varying gradients, broken ground, potholes, ditches, gullies, embankments, and obstacles, adverse weather conditions, electricity, powerlines, loose clothing, speed and fatigue, load shifts, mechanical malfunctions, exposed moving parts and other machinery.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- the operation and maintenance of cane harvesting vehicles including hydraulics
- guarding of exposed moving parts and clearing of blockages
- ensuring loads are secure and within working specifications
- the identification and avoidance of obstacles during cane harvesting operations
- hazard and risk control
- mounting and dismounting
- handling including lifting and carrying
- manual handling
- the application of emergency/defensive driving techniques
- handling, application and storage of hazardous substances
- outdoor work including protection from solar radiation, noise, dust, cane trash and venomous animals
- the protection of people in the workplace
- the appropriate use and maintenance of personal protective equipment.

What personal protective equipment may be relevant to this standard?

This may include boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection.

How might cane be selected for harvest?

Crop class and variety and harvest field may be identified from the farm map, or from the work plan and/or supervisors instructions.

What needs to be considered when setting the harvester?

Adjustments for lodged cane, adjustments for contamination in the cane crop (grass, rocks, timber, steel), adjustments for row width and stool profile, and adjustments for crop density/size.

How might the operation of a cane harvester be demonstrated in a safe, controlled and correct manner?

Appropriate selection and use of cane harvester equipment controls, features, settings and operational techniques for the specific terrain and weather conditions, in the day or night, and on varying infield terrain without causing damage to machinery, equipment, person, property or environment (including soils, cane stool and property structures). Correct operation includes using appropriate methods to cut cane to enterprise standards and the prompt recognition of emergency road and farm conditions so that corrective action including defensive techniques are implemented.

What are the key considerations when co-ordinating the harvesting of cane?

This may involve the application of communication and co-operation between harvester driver, haul-out drivers and operators of other associated equipment.

What types of equipment may be associated with cane harvesters?

This may include compressors, generators, fuel pumps and other ancillary service equipment.

What are the key considerations when harvesting cane in a productive safe and controlled manner?

Cane is cut to enterprise standard, damage to vehicle, cane stools, property structures and farm soil is avoided. Spillage is minimised and controlled and spillage containment is carried out according to industry guidelines. Harvester settings take account of cane characteristics and appropriate adjustments are made to maximise productivity while protecting people, equipment and property.

What environmental implications may be associated with the operation of cane harvesters?

Negative environmental impacts may result from excessive noise and exhaust emissions, and the unsafe use and disposal of maintenance debris, hazardous substances and cleaning agents. High traffic activity, particularly the repeated use of tracks, may negatively impact in soil disturbance, dust problems and increased run-off flows.

What procedures may be included in the shut-down of a cane harvester?

Maintaining a clear thoroughfare, parking away from hazards, securing, cleaning, identifying and attending to any damaged or worn parts.

How might sterilisation procedures vary?

Sterilisation methods and intervals may vary depending on frequency of use, manufacturers recommendations and enterprise requirements.

What records may need to be kept or updated?

Log books, records concerning harvesting, spillages, maintenance records and records of faults and potential faults, and repairs carried out.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to utilise the components and controls of a cane harvester to carry out harvesting operations without damage to vehicle, cane crop or property. It requires the ability to conduct pre-start and shut-down procedures to ensure mechanical reliability, communicate and co-operate with other personnel such as haul-out drivers, control cane spillage, demonstrate emergency driving procedures, effectively sterilise the harvester to prevent cross-property contamination and maintain operational records. Evidence must also be demonstrated in an awareness of positive environmental practices.

The skills and knowledge required to operate a cane harvester must be transferable to a different type of harvester. For example, if competence is evident in the safe operation of a track harvester, it must also be evident in the operation of a double row cane harvester.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- components, controls and features of cane harvesters and their functions
- operating principles and operating methods for cane harvesters
- cane harvester processes and spillage minimisation techniques
- legislative requirements with regard to licensing
- harvest and haulage processes and procedures
- principles of the safe removal of obstacles from harvesters and adjustment of harvester settings
- OHS legislative requirements
- relevant environmental protection codes of practice
- environmental impacts and minimisation measures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- readily familiarise self with local conditions
- perform routine safety, basic service and maintenance procedures on cane harvesters
- demonstrate emergency operating procedures
- obtain licenses and permits
- demonstrate safe and environmentally responsible workplace practices
- read and interpret property maps, operators manuals, manufacturers specifications, work and maintenance plans, and MSDS
- communicate faults, malfunctions and workplace hazards, report and maintain operational records
- comprehend and apply task instructions
- measure and calculate volumes, feed rates, consumption and servicing requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3302A

Unit Descriptor

Service and repair milking equipment

This competency standard covers the process of non-company specific service and repair of milking equipment on farm - to meet prescribed maintenance schedules or to rectify poor performance. It may include the repair of specific machine components and will require a familiarity with the purpose and function of the individual milking machine components.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Service and repair vacuum pumps and the vacuum regulator	1.1 Vacuum pump capacity is established as a part of mechanical testing and performance assessed against design parameters and shed requirements. 1.2 Vacuum pump is disassembled, serviced and reassembled. 1.3 Vacuum pump exhaust and housing is checked and repaired as required to minimise noise and ensure that levels remain within prescribed workplace standards . 1.4 Regulators are checked for performance cleaned and defective parts replaced.
2. Service pulsators and electronic systems	2.1 Pulsator performance is assessed during milking and as a part of mechanical testing. 2.2 Electronic or pneumatic pulsators are removed and repaired or replaced as identified in mechanical testing. 2.3 Extra low voltage segments of the pulsation and wash systems controllers are tested and replaced as required.
3. Service and repair milk pumps and the milk releasing system	3.1 Milk pumps are checked for pumping performance. 3.2 Milk pumps are disassembled and repairs as required including drives and couplings. 3.3 Milk releaser is inspected and checked with rubber seals and flaps replaced as required.
4. Repair and maintain the milk transport system	4.1 Rubberware is inspected for correct specification including liner/teat cup matching and replaced or adjusted as required. 4.2 Claws and claw bowls are inspected for cleanliness and correct connection to suit the specific pulsation system. 4.3 The operation of automatic vacuum cut-off in the claw is assessed and air admission holes cleaned as required. 4.4 Milk lines and air lines are inspected and joins checked for compliance with industry minimum standard recommendations . 4.5 Cans and vessels are checked for dents and damage and shut off valves checked for correct operation. 4.6 Plate cooler is disassembled, cleaned and re- assembled and filters cleaned and replaced as required.

5. Service and repair non-milking systems
 - 5.1 Jetters and cleaning system are inspected to ensure adequate air admission during cleaning and correct water volumes are circulating.
 - 5.2 Repairs or replacement of cleaning system components are effected as required.
 - 5.3 Automatic cup removers are checked to ensure that detectors are clean and effective and that the pistons operate effectively.
 - 5.4 Automatic cup removers are repaired or replaced as required
 - 5.5 Herd recording equipment is inspected and valves and rubberware replaced as required
 - 5.6 Feed systems are inspected and repaired or maintained as required.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Sound communication with the farmer or shed operator and the related milk-harvesting professionals is essential in the performance of this unit	2
Collecting analysing and organising information	Through collation of equipment service records and interview of the personnel associated with the shed operation.	2
Planning and organising activities	Through coordination with milking routines and in adherence with maintenance and service schedules prescribed by the equipment manufacturers.	2
Working with others and in teams	The conduct of these activities needs to be carried out in team environment.	2
Using mathematical ideas and techniques	The use of mathematical formulae in the calculation of equipment performance and compliance with program maintenance schedules is integral to the performance of this unit.	2
Solving problems	Problem solving including the identification of machine and equipment faults and repair of those faults is a prime focus of the performance of this unit.	3
Using technology	A range of testing and diagnostic equipment will be used in the performance of this unit.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What standards are used in calculating milking machine performance?

Industry minimum standards recommendations are specified by the Australian Milking Machine Trade Association and are based on the **International Standards** for Milking Machines ISO5707 *Construction and Performance* and ISO6690 *Mechanical Tests*.

Are there other tasks that need to be done when the vacuum pump is and vacuum regulator is serviced?

The service and repair of vacuum pumps and vacuum regulator may also include the adjustment of vacuum pressure or available effective reserve.

What body is responsible for the maintenance of prescribed workplace standards for noise?

The state Workcover Authority prescribes workplace standards for noise and all other issues of workplace health and safety.

What is required when servicing the regulator?

Regulator servicing may include the cleaning and repair or replacement of valves, valve seats, air filter and air passages.

What work can be carried out on pulsators and electronic components?

This competency standard only covers the service and repair of low voltage pulsation or other electronic systems (up to 36v DC). **Work on high voltage systems must not be carried out.**

What sorts of faults are likely to be apparent when the pulsator system is working ineffectively?

Ineffective pulsator performance may be due to a range of factors including incorrect valve clearance, dirty or worn valves and seats, collapsed air tubes, blocked choke hole, pulsator not aligned with the hole in the pulsator airline, leaking fittings or air tubes, shorting or loose electrical connections, split or perished diaphragms and worn slides or other parts in a mechanical pulsator.

Are there other items that need to be checked when servicing milk pumps and vacuum pumps?

The repair and service of milk pumps and vacuum pumps includes the repair and replacement of drives (including belts & pulleys) and couplings together with the replenishment of oiling systems.

Milk pumps may be centrifugal or diaphragm.

What vacuum pumps need to be serviced?

Vacuum pumps may be slow speed two vane, high speed four vane or liquid ring pumps

What OHS hazards may be identified?

OHS hazards may include exposure to moving machinery parts such as unguarded belts, pulleys or milking platforms, electrical hazards posed by faulty damaged, or poorly located electrical installations, operator hazards posed by hot water or faulty joins in pipework.

What are the consumables that will be replaced as a part of maintenance routines?

Rubberware such as liners, tubing and belts as well as oil wipers, grease containers, indicator globes, guides and limit switch actuators and air filters on pipework and pulsators need to be considered. Milk filters will also be replaced as a part of regular routines. All these consumables will be inspected for wear and deterioration and replaced as required.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in requires evidence that the technician is able to identify faults in milking machine performance and carry out the necessary repairs to restore designed performance.

The skills and knowledge required to service and repair milking equipment must be transferable to differing work environments. For example, repairs may need to be carried out on equipment ranging from small in line plant through to the largest rotary installation. Competence also includes an awareness of the boundaries of the individuals' capabilities and when to call in specialist advice.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- familiarity with the components that make up milking equipment installations and their individual contributions to milking function
- common symptoms of poor milking machine performance
- symptoms demonstrated by animals in the milking environment that indicates poor performance such as cup slip, agitation or frequent urination or defecation.
- routine maintenance requirements for milking equipment
- consumable replacement strategies recommended for milking equipment
- lubrication requirements for milking equipment
- industry safety standards for milking equipment installations.
- OHS guidelines for working with machinery in the rural sector

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- observe and critically evaluate the performance of milking equipment
- competently operate the full range of milking equipment components
- efficiently and effectively carry out mechanical testing of milking equipment
- operate hand tools and use a range of test equipment proficiently
- read and interpret operator's manuals and maintenance and diagnostic data supplied
- communicate effectively with the dairy farmer, milkers and other personnel to identify all contributing factors to milking equipment performance
- disassemble and re-assemble a range of milking equipment components such as pulsators, regulators and vacuum pumps.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3304A**Unit Descriptor****Maintain and service shearing handpieces**

This competency standard covers the process of maintaining and servicing shearing handpieces as part of a wool harvesting operation. It requires the ability to identify worn and faulty handpiece components, install minor repair kit components, service handpieces and observe OHS requirements. Maintaining and servicing shearing handpieces requires knowledge of terminology and assembly procedures for handpieces, maintenance and servicing requirements for shearing handpieces, types of combs and cutters to use under different conditions, OHS policies and practices in the shearing shed before and during shearing.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify worn and faulty handpiece components and install minor repair kit components	1.1 The performance of the handpiece is assessed. 1.2 Comb bed, cups and fork yokes are checked and cleaned , and comb bed is visually checked for flatness. 1.3 Worn and faulty handpiece components are determined in terms of manufacturers specifications. 1.4 Minor repair kit components are installed according to manufacturers specifications and OHS requirements . 1.5 Faulty comb beds are checked and the required scope of repairs is assessed. 1.6 The need for a technician to repair the fault is determined. 1.7 Repairs are carried out according to manufacturers specifications and OHS requirements. 1.8 Repairs by a technician are arranged as required.
2. Service handpiece	2.1 Handpiece components are adjusted to maintain operational performance. 2.2 Handpiece is lubricated to manufacturers specifications. 2.3 Components requiring periodic replacement are installed according to manufacturers specifications. 2.4 Wear and tear on handpiece is identified in terms of effects on performance. 2.5 Safety components are installed and checked before operation of the handpiece. 2.6 Handpiece is run and checked prior to use to determine safe operational performance.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through discussions with other workers and technicians.	2
Collecting analysing and organising information	Through maintaining records for routine replacement of components and through visual inspection and testing.	3
Planning and organising activities	In line with manufacturers specifications, OHS requirements and with industrial awards.	3
Working with others and in teams	Through working with other shearers, experters/technician, wool handlers and classers.	3
Using mathematical ideas and techniques	N/A	-
Solving problems	By diagnosing problems with performance of shearing handpieces.	3
Using technology	Through the use of servicing and maintenance equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

How are the comb bed, cups and fork yokes checked and cleaned?

Comb bed is cleaned of grease and matter, wool caught in the cups is removed and the fork yokes are checked to ensure they swivel freely in the fork.

What handpiece parts are relevant to this competency standard?

Handpiece parts include centre post and cup, tension pin, sleeve, cup, retaining spring, nut, fork, fork yokes and retaining spring, pin drive, worm drive, cogs, screws, back end, crank and ball, bearings, and back joint guard.

What OHS requirements may be applicable to this standard?

Safe systems and procedures for:

- operating shearing and crutching equipment
- manual handling including lifting and carrying
- protection from organic and other dusts
- protection against electrical hazards
- controlling and removing hazards
- protection from hazardous noise
- appropriate use of personal protective clothing and equipment.

What components may require periodic replacement?

Fork yokes, back cogs, joint guards and drive pins.

What safety components need to be in place before operation of a handpiece?

The tension spring, the fork yoke retaining bar and the tension pin retaining spring.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in maintaining and servicing shearing handpieces requires evidence that the shearing handpiece has been maintained and serviced to optimal shearing performance standards. The skills and knowledge required to maintain and service shearing handpieces must be transferable to a range of work environments and contexts. For example, this could include different wool sheds, wool types and conditions.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- terminology and assembly procedures for handpieces
- maintenance and servicing requirements for shearing handpieces
- components of a shearing handpiece
- OHS policies and practices in the wool shed before and during shearing and crutching.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- identify worn and faulty handpiece components
- install minor repair kit components
- service handpiece
- observe OHS requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3305A

Install and terminate extra low voltage wiring systems

Unit Descriptor

This competency standard covers the process of installing wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less.

Extra low voltage of 24 volts or less applies to wiring used in irrigation systems between controllers and system components such as solenoid valves, in milking equipment systems such as pulsator systems between controllers and system components such as solenoid valves and in garden lighting systems. Installing and terminating extra low voltage wiring systems requires knowledge of basic electricity and electrical principles, irrigation system wiring materials and techniques, isolation and tagging procedures, testing equipment and procedures and OHS guidelines for installing extra low voltage wiring.

This unit is based on and linked to the National Electro-technology Benchmark Standard EBS204.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Plan and prepare for installation of extra low voltage wiring	1.1 Installation is planned and prepared to ensure OHS policies and procedures are followed, and the work is appropriately sequenced according to requirements. 1.2 Appropriate personnel are consulted to ensure the work is co-ordinated effectively with others on the work site. 1.3 Cables and wires are sized to suit calculated load. 1.4 Wiring system components are checked against job requirements. 1.5 Accessories are obtained according to established procedures and to comply with organisational and task requirements. 1.6 Location in which specific items of accessories, apparatus and circuits are to be installed is determined from job requirements. 1.7 Materials necessary to complete the work are obtained according to established procedures and checked against the job requirement. 1.8 Tools, equipment and testing devices needed to carry out the installation work are obtained, following established procedures they are checked for correct operation and safety. 1.9 Preparatory work is checked to ensure that it complies with requirements and no unnecessary damage has occurred.

2. Install wiring systems
 - 2.1 OHS policies and procedures for installing electrical wiring systems are followed.
 - 2.2 Wiring systems are installed to meet requirements, without damage or distortion to the surrounding environment or services.
 - 2.3 Accessories are terminated and wires are connected as required to solenoids and controllers, according to manufacturer and enterprise requirements.
 - 2.4 Unplanned events or conditions are responded to using established procedures.
 - 2.5 Approval is obtained from appropriate personnel according to established procedures before any contingencies are implemented.
 - 2.6 On-going checks of the quality of the work are undertaken according to established procedures.
3. Check and notify completion of work
 - 3.1 Final checks are undertaken to ensure the installed wiring systems conforms to requirements.
 - 3.2 System is tested to ensure that it works.
 - 3.3 Work completion is notified according to established procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Obtaining approval from appropriate personnel before contingencies are implemented.	2
Collecting analysing and organising information	Interpreting specifications and installation instructions.	2
Planning and organising activities	Planning and preparing for installation of extra low voltage wiring.	2
Working with others and in teams	Consulting appropriate personnel to ensure work is co-ordinated effectively with others involved on the work site.	2
Using mathematical ideas and techniques	Sizing cables and wires to suit calculated load.	2
Solving problems	Responding to unplanned events or conditions.	2
Using technology	Working with communications and machine testing equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What does extra low voltage (ELV) wiring refer to?

This refers to 36 volts or less and applies to wiring used in milking equipment systems such as pulsation systems, in irrigation systems between controllers and system components such as solenoid valves, and in domestic garden lighting systems.

What OHS policies and procedures may be relevant to this standard?

OHS policies and procedures may include systems for the prevention of electrical injury, hazard identification and risk control measures, the safe operation and maintenance of machinery and equipment, and the selection, use and maintenance of relevant personal protective clothing and equipment.

What equipment might need to be available for installation work?

Equipment may include a range of power and hand tools, mechanics tool kit and first aid kit.

What do systems consist of?

Systems include wiring, switching mechanisms, circuit protection devices and electronic pulsators, wiring looms, conduits and cabling covers.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in installing and terminating extra low voltage wiring systems requires evidence that a person can plan, design and carry out installation of wiring enclosures, cable support systems, cables and accessories in electrical systems of 36 volts or less and undertake checks that the system conforms to requirements and operates effectively.

The skills and knowledge required to install and terminate extra low voltage wiring systems must be transferable to a different work environment. For example, extra low voltage wiring may be installed in a range of agricultural and horticultural situations.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- basic electricity and electrical principles relating to extra low voltage wiring
- milking equipment, garden lighting and/or irrigation system wiring materials and techniques
- isolation and tagging procedures
- computerised controller systems
- enterprise policies and procedures
- testing equipment and procedures
- OHS guidelines for installing extra low voltage wiring.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read labels and signage to differentiate between extra low voltage and other electrical systems
- read and follow enterprise procedures for irrigation system wiring
- size cables and wires to suit calculated load
- check and notify completed installation activities
- follow enterprise OHS procedures and safely work with extra low voltage systems.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3307A

Co-ordinate machinery and equipment maintenance and repair

Unit Descriptor

This competency standard covers the process of co-ordinating machinery and equipment maintenance and repair for a small enterprise. Typically this is a role undertaken by a single person with responsibility to ensure that machinery and equipment for the enterprise is maintained and repaired in a way that allows the core business of the enterprise to continue with minimal disruption.

The co-ordination of machinery and equipment maintenance and repair is likely to be carried out under limited supervision with checking only related to overall progress. It requires the application of extensive agricultural, horticultural and/or conservation and land management knowledge and a broad range of relevant skills. The work is usually done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment, work organisation, services, actions and achieving outcomes within time constraints.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for maintenance and repair work	1.1 Requirements of the work responsibilities are clarified with the supervisor and according to enterprise guidelines. 1.2 Equipment and material resource requirements are identified according to the scope of the co-ordination work and the supervisors instructions. 1.3 The priorities for maintenance and repair activities and time allocation is identified, documented and presented to the supervisor for verification. 1.4 The environmental implications of the proposed maintenance and repair work are identified and the likely outcomes assessed and reported to the supervisor. 1.5 OHS hazards are identified, risks assessed and reported to the supervisor. 1.6 Personal protective equipment(PPE) is selected, used, maintained and stored according to the type of work site activities to be undertaken.
2. Maintain and repair machinery and equipment	2.1 Equipment/machinery is maintained and repaired as authorised by the supervisor and according to enterprise guidelines and work place priorities. 2.2 Materials to assist in maintenance and repair work are purchased, stored and/or used as required. 2.3 Delivery of materials to the site is organised according to workplace priorities. 2.4 Machinery and equipment is organised to be on-site in good order when they are required. 2.5 Maintenance and repairs requiring specialist attention and work are identified and organised according to enterprise guidelines.

3. Co-ordinate and report on maintenance and repair activities
 - 3.1 Resources are co-ordinated and timed to suit the maintenance and repair activities and priority of work.
 - 3.2 Operators are informed of appropriate use and their responsibilities in respect to operational maintenance requirements of machinery and equipment.
 - 3.3 Personnel, activities, timelines and materials usage are monitored and **documented** according to enterprise guidelines.
 - 3.4 **Contingency situations** are recognised and reported to the supervisor and corrective actions taken according to enterprise guidelines.
 - 3.5 A simple **report** is written to inform management of maintenance and repair activities undertaken and completed.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Ideas and information may need to be communicated with the supervisor such as regular reporting.	2
Collecting analysing and organising information	Information on machinery, equipment and resource requirements may need to be collected, analysed and organised according to the scope of work required.	2
Planning and organising activities	Activities may need to be planned and organised to ensure that the needs of management are met and that down time is minimised for the enterprise.	2
Working with others and in teams	Teamwork may be applied to ensure that machinery and equipment is properly maintained and operated.	2
Using mathematical ideas and techniques	Mathematical ideas and techniques may be applied when organising time frames to meet maintenance and repair priorities.	2
Solving problems	Site contingencies, personnel difficulties, timeline failures and assessing hazards and identifying controls may require problem-solving skills.	2
Using technology	Technology may be used to communicate and record progress of work activities.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What resource requirements are likely to be identified?	Materials may include goods that will be consumed by the maintenance and repair work such as fuels, oils, cleaning agents, solvents and chemicals.
What might be the environmental implications of proposed work site activities?	Environmental implications may include risk of contamination of soils, water or adjoining property through chemicals flowing into drains and water sources, and damage to plants. Compliance with local, State/Territory, and Commonwealth environmental legislation is required.
What OHS hazards may apply to work site activities?	Hazards may include disturbance of services, solar radiation, dust, noise, through traffic, uneven surfaces and holes, moving machinery and machinery parts, powered equipment and hand tools, confined spaces, hazards from use of hired equipment (untrained staff), and overhead hazards including powerlines.
What personal protective equipment (PPE) is likely to be selected?	PPE will be determined by the type of activity being undertaken and may include work boots, gloves, overalls, sun hat and sunscreen lotion, safety harness, hard hat, hearing or eye protection, respirator or face mask.
Where might the materials be available from?	Materials to be consumed by the activity may be available through the enterprise as a stockpile or stored goods, or it may be purchased for the job. Materials are often available through supply companies. The enterprise may have purchasing policies and procedures and existing accounts with some suppliers.
Why would activities etc., be documented?	Documentation of work site activity may determine if the work is on track, provide progress reports to supervisors, and plan for delivery and storage of materials to minimise costs and time wasting for the enterprise.
What might be considered contingency situations?	Contingency situations may include the delay in delivery and/or breakdowns with equipment and machinery, poor weather conditions, poor quality materials and unforeseen soil problems.
What might be included in a simple report?	A simple report may include the authors name and date, progress of activities completed, major issues, OHS issues, expenditure, and any future activities that may need to be planned.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in co-ordinating machinery and equipment maintenance and repair requires evidence that a person can prepare and plan for maintenance and repair work, organise resources required and monitor and report on activities undertaken.

The skills and knowledge required to co-ordinate machinery and equipment maintenance and repair must be transferable to a different work environment. For example, this could include different machinery and equipment, workplaces and enterprise guidelines.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- work schedule programming
- possible causes of disruption to work activities and their effect on quality and time schedules
- responsibilities and requirements for maintaining and repairing machinery and equipment
- the range, use and availability of materials, equipment and machinery that may be required for the project
- environmental awareness associated with undertaking maintenance and repair work on machinery and equipment to ensure the impact on the environment is minimal
- OHS issues, legislative requirements and codes of practice.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read and interpret documentation associated with work site activities
- calculate material and resource requirements
- co-ordinate a team to achieve optimum performance
- communicate with personnel at all levels
- document results clearly and concisely
- perform an OHS risk assessment.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3308A

Unit Descriptor

Operate a dairy recycling system

This competency standard covers the process of operating a dairy waste management system, maintaining the equipment used for dairy waste disposal from the dairy shed, and monitoring its efficiency. It includes cleaning the system and maintaining clear and accurate records about the operation and monitoring of the system. When the requirements of this standard are achieved, the dairy sheds and surrounding environment are maintained to community standards.

Disposing of the dairy waste from a dairy is likely to be carried out under limited supervision from others with checking only related to overall progress. It is normally done within established routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time and budgetary constraints.

Unit Sector No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to work with dairy waste disposal equipment	1.1 Work to be undertaken is interpreted from the work program where necessary, and confirmed with management. 1.2 Discussions are held with other workers who may be affected by the maintenance activities to ensure continued smooth operation of the production process. 1.3 OHS hazards are identified, risks assessed and suitable controls implemented. 1.4 Suitable personal protective equipment (PPE) is selected, used and maintained. 1.5 Tools and equipment suitable for the work to be undertaken are selected, checked, and maintained if necessary.
2. Maintain and operate a dairy waste storage and disposal system	2.1 Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment. 2.2 Dairy waste removal and disposal equipment is correctly serviced and maintained. 2.3 Dairy waste disposal systems are used according to system design in compliance with approval granted by local government and the State environment protection authority. 2.4 Recognised techniques for irrigation from dairy waste storages are carried out according to establishment practice. 2.5 In-shed dairy waste pits are flushed and drained as required.

- 3. Monitor dairy waste disposal system
 - 3.1 Organisational OHS procedures, practices, policies and precautions are observed and followed, including the use of personal protective equipment.
 - 3.2 Flow rates, pit levels and equipment are regularly checked to maintain effective operation of the system.
 - 3.3 Cleaning procedures and hygiene practices are carried out according to established practice.
 - 3.4 Monitoring reflects an understanding of **environmental duty of care**.
- 4. Conduct hygiene and administration activities
 - 4.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations.
 - 4.2 Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturers specifications, organisational procedures and regulations.
 - 4.3 All containers, leftover fluids, waste and debris from the operations are disposed of safely and appropriately.
 - 4.4 All required **records** and documentation are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	With licensing authorities, farm management and other employees.	2
Collecting analysing and organising information	To ensure environmentally responsible dairy waste handling.	2
Planning and organising activities	In undertaking the preparation activities for maintaining and monitoring the system.	2
Working with others and in teams	To safely remove dairy waste from the unit and manage disposal.	2
Using mathematical ideas and techniques	In monitoring gauges and maintaining appropriate flow rates in the system.	2
Solving problems	In ensuring that any hazards present are dealt with effectively and promptly.	2
Using technology	To maximise long-term environmental sustainability of the system.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What may dairy waste include?

It may include manure, urine, cow hair, mucus, milk, yard and plant washing water, storm water, detergent and chemical residues, soil, suspended solids, stones, string, hay, and pasture.

What actions can be taken to minimise or eliminate OHS risks?

Systems and procedures for:

- outdoor work, including protection from solar radiation
- safe livestock handling, using calm and positive actions to avoid alarming stock
- operating high pressure cleaners
- protection from hazardous noise
- preventing zoonotic infection
- selection, use and maintenance of personal protective clothing and equipment
- the rights and responsibilities of employers and employees under the relevant State and workplace OHS legislation.

Codes of practice for:

- working with livestock
- manual handling
- the control of workplace hazardous substances
- OHS requirements for the safe use of chemical and biological agents.

The safe operation of farm vehicles, machinery and equipment, including Australian Standards for:

- guards for agricultural tractor PTO drives
- agricultural wheeled tractors - Roll Over Protective Structures (ROPS) in service safety inspection and testing of electrical equipment.

What personal protective equipment (PPE) may be relevant to this standard?

This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What are some of the methods used to apply untreated dairy waste directly to the land?

Methods such as application by sump, pump and sprinkler, pump and movable hose, or manure tanker.

What factors influence the amount of dairy waste produced by a herd?

Such factors as the age and weight of animals in the herd, whether animals are fed during milking, level of disturbance during milking, stock treatment prior to yarding and milking, time spent by the herd in laneways and yards, slope and size of yards, volume of water used in the cleaning system, and milking management.

What methods might be used to treat and store dairy waste before it is applied to the land?

Such methods as two ponds, a single storage pond, turkey nest storage pond, or a pump to a remote pond system.

How might dairy waste be applied to the farm to ensure a rate that allows efficient use by the environment?

Through systems such as direct flood irrigation, pressure irrigation (sprinkler or drip irrigation), hand moved flexible hose, a mixture of waste water with irrigation water, a manure spreader and incorporating the waste with the soil.

What are some methods of conveying dairy waste to treatment or storage areas?

They include an open drain or gravity pipe flow, a pumping system with pump, sump and rising main pipe, a diversion bank, a siphon discharge, or a scraper.

What further considerations must be made when applying dairy waste to the land?

They include animal health and environmental issues associated with applying raw manure, urine and milk to pastures, storage of waste, i.e., leakage from ponds, location of water courses in relation to storage and effect of soil types, disposal of waste, i.e. location of water courses, rivers, bores, irrigation areas, residential areas, and the effect of waste, particularly milk, on rivers.

What is meant by an environmental duty of care?

Environmental duty of care may include an awareness of legislative and regulative requirements, codes of practice, established guidelines, organisations environmental plan including any State based environmental and local government regulations for dairy waste storage and disposal.

What relevant information might be recorded and reported, and in what form might it be documented?

Dates, times and periods of operation and maintenance, chemicals and other substances used including quantities and methods, and readings from temperature and flow-rate gauges. Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

Competence in operating a dairy recycling system requires evidence that dairy waste is recycled cleanly and efficiently resulting in minimal impacts on the surrounding environment.

The skills and knowledge required to operate a dairy recycling system must be transferable to a different work environment. For example, across the range of shed types and disposal systems in place in the organisation.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the purpose of dairy waste management systems
- procedures for installing dairy waste management systems
- components of dairy shed and yard waste
- the nutrient and chemical status of the different types of waste
- advantages and disadvantages of reusing treated and untreated waste
- methods of reducing the amount of waste
- methods of applying untreated waste to the land
- methods of treating and storing waste before applying to the land
- methods of applying treated waste to the land
- relevant legislation and regulations relating to the use, treatment and storage of dairy waste
- OHS obligations regarding the operation of dairy waste management systems.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- operate dairy waste management systems in accordance with OHS and environmental legislation, regulations and codes of practice
- maintain and monitor gauges and instruments that control the dairy waste recycling system
- implement dairy waste management plans
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and Material Safety Data Sheets
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- observe, identify and react appropriately to environmental implications and OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3309A

Unit Descriptor

Operate machinery in adverse conditions

This competency standard covers the functions involved in operating machinery in adverse working conditions.

It requires particular skills and knowledge to carry out pre-operational checks and basic repairs on machinery, assess work requirements, and maintain records. In addition, it requires knowledge of licensing requirements, workplace safety and positive environmental practices associated with the operation of machinery. The work in this standard is likely to be carried out under limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Assess operating conditions prior to machinery use	1.1 Degree of adversity is assessed with regard to the safe operation of machinery. 1.2 Necessity of work and work plan requirements are assessed against safety considerations and a safe operational plan implemented. 1.3 Potential and existing OHS hazards in the workplace are identified, risks assessed and controlled according to enterprise requirements.
2. Prepare machinery and attached equipment for use	2.1 Machinery and equipment appropriate to job requirements is selected and confirmed against the work plan. 2.2 Routine pre-operational checks of machinery and equipment are completed to manufacturers specifications and enterprise requirements. 2.3 Attached equipment is secured and machinery calibrated for operation according to manufacturers specifications.
3. Operate machinery and attached equipment	3.1 Machinery and equipment is operated in a safe and controlled manner and monitored for performance and efficiency. 3.2 Environmental implications associated with machinery operation are identified, assessed and reported to the supervisor and machinery operation modified accordingly. 3.3 Suitable personal protective clothing and equipment is selected, used and maintained according to OHS and enterprise requirements.

4. Check and complete operation of machinery and attached equipment
 - 4.1 **Shut-down** procedures for machinery and equipment are completed to manufacturers specifications and enterprise requirements.
 - 4.2 Malfunctions, faults, irregular performance and damage to machinery and equipment are detailed and reported according to enterprise requirements.
 - 4.3 Machinery and equipment operational records are completed and maintained according to enterprise requirements.
 - 4.4 Machinery and equipment is cleaned, secured and stored according to OHS and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information and ideas with regard to the degree of adversity in the operating conditions and the safe application of machinery and equipment may be discussed with the supervisor and work team.	1
Collecting analysing and organising information	Information with regard to machinery performance, faults and maintenance may be observed and recorded for analysis and organised by reports.	1
Planning and organising activities	Activities involving maintenance and repairs, or alternative operating methods, may be planned and co-ordinated around work schedules or sequenced as required.	1
Working with others and in teams	Teamwork may be applied in monitoring operating conditions and the application of appropriate methods and procedures to complete work tasks.	1
Using mathematical ideas and techniques	Mathematics may be applied in the calibration and adjustment of equipment settings, and the calculation and measurement of load weights and servicing requirements.	1
Solving problems	Adverse operating conditions may require alternative arrangements to be planned to meet the work plan requirements.	1
Using technology	To communicate, measure and record information with regard to maintenance, usage and performance of machinery and equipment.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What might be included in assessing the degree of adversity in operating conditions?

This may include assessment of steep ascents and descents, working across slopes, difficult terrain, varying gradients, slippery and uneven surfaces, water crossings, saturated ground, loose sand, ice/snow and other extreme weather conditions.

What may be included in a work plan?

Pre-operational checks and maintenance procedures, designated job tasks, equipment, resources and materials for use, supervisors instructions, timeframe for work completion and reporting requirements.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- operating and maintaining machinery including hydraulics and guarding of exposed moving parts
- hazard and risk control
- emergency operating and defensive driving procedures
- ensuring working loads are secure and within specifications
- manual handling including lifting and carrying
- outdoor work including protection from solar radiation, dust and noise
- the appropriate use and maintenance of personal protective clothing and equipment.

What potential and existing hazards may be encountered in the workplace?

Workplace hazards may include exposure to loud noise and fumes, solar radiation, dust, and hazardous substances. It may also include oil and grease spills, electricity, mechanical malfunctions and exposed moving parts including hydraulics. It may also include difficult terrain and extreme weather conditions.

What enterprise requirements may apply to this standard?

Standard operating procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDS), work notes, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), OHS procedures, supervisors oral or written instructions, work and routine maintenance plans.

What range of machinery and equipment may be applicable to this standard?

Hydraulic equipment, skidsteer loaders, hydroplats, stationary engines, pumps, irrigation equipment, spraying equipment, harvesters, balers, seeders, tractors (fitted with roll over protection structures) and tractor-drawn implements, fertiliser spreaders, fuel tanks, hedging machines, solar and wind powered equipment, chippers, mulchers, rotary hoes, chain saws, motor cycles (2, 3 or 4 wheel), all terrain vehicles, cars and utilities, and light trucks.

What may be involved in routine pre-operational checks of machinery and equipment?

Pre-start and safety checks, service and maintenance of cooling system, fuel, oils and lubricants, wheels and tyre pressure, fan belts, leads, lines, connections, air filters, air-conditioning, brakes, clutch, electrical, gearbox, hydraulics, steering, lighting and transmission. Inspection and inspection of safety guards, PTO stubs and shafts, and hitch and towing points. Check and confirm equipment calibration settings. Confirm operating methods for turbo-charged engines. Observe and monitor noise levels for correct operation. Preparation of independently powered tools may include cleaning, lubricating, priming pumps, clearing filters, tightening, basic repairs and adjustments. Identify and segregate unsafe or faulty equipment for repair or replacement.

How might the operation of machinery be demonstrated in a safe and controlled manner?

Appropriate selection and use of machinery and equipment controls, features, settings and operational techniques for the specific terrain (on and off-road environments which may be smooth, rough, slippery, boggy or hilly) and weather conditions without causing damage to machinery, equipment, person, property or environment.

What environmental implications may be associated with the operation of machinery and equipment?

Negative environmental impacts may result from excessive noise and exhaust emissions, the incorrect use and disposal of maintenance debris (oils, containers, chemical residues), and hazardous substances (fuel, fertiliser). Impacts may also include run-off flows of water and cleaning agents from servicing, maintenance and cleaning activities, soil disturbance and dust problems from high activity traffic (including irrigation equipment).

What personal protective clothing and equipment may be required to operate machinery?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What procedures may be included in the shutdown of machinery and equipment?

Safe dismount procedures (including turning engine off), maintaining a clear thoroughfare, parking away from hazards, securing, refuelling and cleaning.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in the operation of machinery in adverse conditions requires evidence of the ability to assess operating conditions against work plan requirements and determine the risk to personal safety prior to undertaking work tasks. Evidence must be demonstrated in safe workplace and environmentally responsible practices.

The skills and knowledge required to operate machinery in adverse conditions must be transferable to a different work environment. For example, if competence is evident in the safe operation of a tractor on steep and boggy terrain, it must also be evident in the operation of a four-wheel drive in various difficult terrain contexts.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- hazards and risks associated with the operation of machinery and equipment in adverse and emergency situations
- principles of weight distribution with regard to load shifting and machinery movement
- components, controls and features of machinery and equipment and their functions
- operating characteristics of 2-stroke, 4-stroke and diesel motors
- procedures for cleaning, securing and storing specialised machinery, equipment and materials
- legislation, regulations and codes of practice with regard to workplace OHS, use and control of hazardous substances, licensing, roads and traffic requirements
- enterprise policies with regard to plant and equipment use, recording and reporting routines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- assess operating conditions and determine the work plan accordingly
- demonstrate emergency procedures
- obtain relevant licences and permits
- read and interpret manufacturers specifications, work and maintenance plans, and MSDS
- communicate faults, malfunctions and workplace hazards, report and maintain operational records
- calibrate, measure and calculate volumes, load weights, consumption and servicing requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3312A

Unit Descriptor

Service and repair bores and windmills

This competency standard covers the process of maintaining bores and windmills.

It requires the application of discretion and judgement to assess and determine requirements for specialist direction, and refer more complex faults for specialist advice. It requires the application of skills and knowledge to service and repair pumps and associated components to restore and maintain efficient operational functions. Competency requires an awareness of workplace safety and positive environmental practices associated with maintenance activities. The work is likely to be carried out under routine supervision with intermittent checking within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Establish bore history and enterprise policy	1.1 Enterprise records are accessed, inspected and bore history is established. 1.2 Enterprise policy regarding service and repairs to bores and windmills is established in consultation with the supervisor. 1.3 Specialist instructions and assistance is sought as required from recognised industry sources according to enterprise requirements .
2. Prepare to carry out service and repairs	2.1 Tools, equipment and materials appropriate to job requirements are selected and inspected for serviceability. 2.2 Dismantling and stripping of windmill is carried out to industry standards and according to enterprise requirements. 2.3 Existing and potential OHS hazards in the workplace are identified, risks assessed and controlled according to enterprise requirements.
3. Carry out service and repairs	3.1 Suitable personal protective equipment is selected, used and maintained according to OHS and enterprise requirements. 3.2 Service and repairs to bores, windmills, motors and pumps are carried out according to manufacturers specifications, operators manual and enterprise requirements. 3.3 Complex faults and repairs are reported and referred for specialist advice and remedial action according to enterprise requirements. 3.4 Lost equipment is safely retrieved according to OHS guidelines and enterprise requirements.

4. Complete service and repair activities
- 4.1 Bore and windmill components are reassembled and tested for operation according to manufacturers specifications to ensure the restoration of full function and flow.
 - 4.2 Work site, tools and equipment are cleaned, returned to operating order and stored according to OHS and enterprise requirements.
 - 4.3 Waste from service and repair activities is collected, treated and disposed or recycled according to enterprise **environmental** requirements.
 - 4.4 **Relevant information** is documented according to industry and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to complex mechanical faults may be reported and referred for specialist advice and remedial action.	3
Collecting analysing and organising information	Information with regard to bore histories and water requirements may be collected for analysis and organised by reports.	3
Planning and organising activities	Repair activities involving specialist instruction may be better planned and co-ordinated with routine maintenance procedures to minimise downtime.	3
Working with others and in teams	In the application of accurate communication and interpretation of methods and procedures to safely facilitate effective repairs and maintenance.	3
Using mathematical ideas and techniques	Measuring distance, speed and flow rates, calculating volumes, and estimating quantities of materials will require mathematical application.	2
Solving problems	A problem relating to tool and equipment breakdown or the unavailability of replacement components may arise during the service and repair of bores and windmills.	2
Using technology	It may be applied in the use and preparation of tools and equipment, the calculation of servicing materials and to trouble shoot mechanical faults.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What bore history details may be established?	Driller's report, depth and location, date established, specification of casing and perforations, life of other bores in the area, hydrological data for the area, equipment used on the bore, flow rates, water quality, maintenance history, equipment changes, and stock watering.
What enterprise policy considerations may be relevant to service and repair activities?	This may include the details of available expertise, required support, bore accessibility, estimated costs and budgetary constraints, urgency of repairs, and relevant maintenance programs.
What enterprise requirements may be applicable to this standard?	Standard operating procedures (SOPs), industry standards, production schedules, Material Safety Data Sheets (MSDS), work notes and plans, product labels, manufacturers specifications, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and supervisors oral or written instructions.
What tools, equipment and materials may be used for service and repair activities?	Hand tools, hand held power tools, and grease guns. Cleaning and maintenance supplies including grease, fuel, oil, chemicals, water steam, power, and air.
What may be involved in the dismantling and stripping of windmills?	Immobilising the windmill, restraining and removing the sails from the mill head, and removing the mill head.

What OHS requirements may be relevant to this standard?

Safe systems and procedures for:

- the secure attachment of drilling equipment (including ensuring the windmill sails are locked)
- hazard and risk control
- carrying out maintenance operations
- safe lifting, carrying and handling
- manual handling (including the use of pipe handling equipment)
- handling, application and storage of hazardous substances
- outdoor work including protection from solar radiation, dust and noise
- clear communication signals between operators
- the appropriate use and maintenance of personal protective equipment.

The servicing of windmills requires the need to ensure that sails are locked off before personnel are allowed onto the tower, and particular attention should be paid to the avoidance of hand injuries when using pipe handling equipment and tools. Consideration should be given to providing rope support when climbing windmills.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What may be involved in the preparation, service and repair of bores, windmills, motors and pumps?

The service and repair of bores may involve the pulling of the bore which includes fitting clamps, removing rods and columns, the laying out of rods and columns, replacing worn or faulty parts, checking rods for straightness and checking spacers for wear, and examining for and noting lime deposits.

Programmed procedures for the checking of the bore head may include checking of the belt condition, glands, pulleys, vibration or noise, slipping, throwing, or loose belts, low flows, correct rotation, worn parts and bearings.

The service and repair of windmills may involve stripping the windmill, carrying out checks and repairs to mill blades, fan structure, mill head, differential head and gearbox.

The service and repair of solar pumps may involve cleaning the solar panels, checking wiring and measuring voltage.

Repair of pumps may include the checking and replacement of liners, buckets, impellers, seals and bearings, the checking of foot valves and submersibles, replacing worn or faulty parts, checking for loose bolts, checking stability of the block, and sand pumping procedures.

What may be involved in fishing for lost equipment?	Identifying what is down the bore, identifying location of lost equipment, manufacturing suitable tools, and rigging the bore for safe retrieval according to OHS guidelines.
What positive environmental procedures may be relevant to service and repair activities?	The safe use and disposal of maintenance debris including oils, oil containers, fuel and chemical residues.
What relevant information may be documented?	This may include tool and equipment usage and operational faults or malfunctions, bore and windmill servicing and repair procedures and outcomes, specialist consultations, mechanical faults or malfunctions, damage details, and hazard and incident reports.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in servicing and repairing bores and windmills requires evidence that a person can functionally maintain all components of bores and windmills including carrying out repairs to bore, mill heads and pumps to ensure the full function and flow of water supplies. It also requires the ability to dismantle windmills, source and apply specialist direction, refer to bore histories for troubleshooting, dismantle and assemble mechanical components, recognise and rectify mechanical faults, and carry out testing procedures to determine correct operation. Evidence must also be demonstrated in the application of safe workplace and environmentally responsible practices.

The skills and knowledge required to service and repair bores and windmills must be transferable to a different work environment. For example, if competence is evident in the maintenance of bores and windmills in an agricultural enterprise, it must be evident that sufficient skills and knowledge may be applied and adapted in a range of rural environments.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- construction of bores and windmills and maintenance requirements
- diesel engine components, maintenance requirements and repair procedures
- working principles of diesel engines
- drive systems and components
- types and uses of lubricants and other servicing materials
- servicing characteristics of bores and windmills
- types, characteristics, uses and limitations of hand and power tools
- basic diagnostic processes and techniques
- environmental codes of practice with regard to maintenance activities
- OHS legislative requirements.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- apply basic diagnostic techniques
- recognise faults and deterioration of components and carry out mechanical repairs
- select and match tools and equipment with work requirements
- apply hand-eye co-ordination
- apply safe workplace and positive environmental procedures
- read and interpret enterprise policy, maintenance plans, manufacturers specifications, MSDS
- effectively communicate with contractors and supervisor, and record and report maintenance details and outcomes
- calculate volumes, and measure speed, flow rates and distance.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3313A**Monitor and provide advice on cleaning milking machines****Unit Descriptor**

This competency standard covers the process of carrying out the cleaning of milking machines and associated equipment including detergent selection, selecting wash cycle programs and problem investigation of cleaning systems. The competencies are about achieving the highest possible standards of dairy hygiene and so include an understanding of the milking process, the nature of milk and the basic components of the cleaning process.

The competencies involved in this unit also include the provision of specific advice on machine cleaning.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify cleaning problems	1.1 Current hygiene practices are established through interview and shed records. 1.2 Factory test results are accessed and collated to establish bacterial levels for the plant and identify potential cleaning problems. 1.3 Milking equipment is inspected and disassembled as required to identify residues and other evidence of poor cleaning regimes. 1.4 Cleaning chemicals are identified to establish current cleaning and hygiene regimes. 1.5 Water quality and quantity is assessed to establish the effect on cleaning procedures. 1.6 OHS hazards are identified, risks assessed and hazards reported, or risk controlled and the risk assessment recorded as a part of investigative procedures.
2. Carry out cleaning routines	2.1 Machine and ancillary equipment cleaning routines are carried out as specified by the equipment manufacturer. 2.2 Vat cleaning routines are carried out as specified by the equipment manufacturer. 2.3 Water temperature and the chemical concentrations circulated are monitored through the cleaning cycle. 2.4 Plant is manually cleaned to removed milk stone and other accumulated residues.
3. Advise on chemicals and cleaning routines	3.1 Cleaning routines to suit the installation are determined and documented in consultation with the equipment manufacturer and chemical company representatives as required. 3.2 Hygiene regime for the total installation is recorded and specified to the shed manager. 3.3 Prescribed cleaning routines are evaluated to ensure that equipment and cleaning performance meets performance specification.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Sound communication practice is crucial to the performance of this unit to ensure that accurate information is obtained on the cleaning process.	2
Collecting analysing and organising information	The collection and collation of information on the installation and the hygiene procedures will be carried out in hard and electronic forms. Information and records on which advice will be based will utilise information from all sources.	2
Planning and organising activities	The collation of information on all parameters in the cleaning process needs to be planned to co-ordinate with the daily milking and factory reporting processes.	2
Working with others and in teams	In order to access the maximum amount of information on the herd, as well as machine specifications and performance, a team approach is required to cleaning problems.	2
Using mathematical ideas and techniques	A range of mathematical calculations are involved in the calculation of equipment specifications, the recording of all aspects of bacteriological testing, and in the calculation of cleaning chemical concentrations.	2
Solving problems	In the diagnosis of high bacterial counts in milk and investigation of machine cleaning problems.	2
Using technology	Communication and calculation of testing results will include use of a range of technologies.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What are hygiene practices?

Hygiene practices may include consideration of all cleaning practices from milking the cow to the milk collection at the farm gate.

Does the hygiene practice only include the cleaning method?

Establishing current hygiene practices will include an evaluation of the equipment specification cleaning method as well as the cleaning system used.

How important are factory tests in the context of machine cleaning?	Factory tests are many and varied and will range from BMCC (bulk milk cell count) through to a Total Plate Count to estimate the total number of living bacterial colonies in a representative milk sample - with differing tests for differing bacteria. These tests are crucial in establishing the effectiveness or otherwise of the cleaning process.
Why is temperature and chemical concentration important in the cleaning of milking machines?	There are four components of the milking machine cleaning quadrant that together bring about efficient cleaning - chemical concentration and turbulence.
Are there any other factors that affect cleaning performance?	Impinging on all components of the cleaning quadrant are those of water quality and quantity . This will need to be constantly monitored and assessed as a part of any cleaning program.
What sort of cleaning chemicals are used?	Cleaning chemicals include acid and alkaline detergents and sanitisers.
What are the OHS implications inherent in the performance of this unit?	Procedures to identify OHS hazards, assess risks, establish safe systems of work and complete OHS risk assessment records .
What is included in machines and ancillary equipment?	This will include the milking plant including all lines and cans, as well as additional non-milking equipment such as jetters, cup removers, etc.
What in particular should be checked as trouble spots during the cleaning of the machines and ancillary equipment?	There are many points at which problems may occur but in particular the following areas should be checked: • airline, liners, milking clusters, rubber or plastic dropper components, automatic take offs, milk receival unit, end of milk line, curved milk lines, air injector, sanitary trap, milk pump, milk filter and the plate cooler.
What is included in the vat cleaning routines?	Vat cleaning routines include the cleaning of plate coolers and the milk releasing system.

Are there any specific checks to be undertaken when carrying out vat cleaning routines?

In the older style of vat, checks should include:

- the bridge, dipstick including the collar, agitator including all blades, corners, outlet including the O-ring, level between milkings where the largest fat build-up may occur and the lids, particularly at the milk entry point.

In the auto washing vat, additional checks should be made of:

- wash pumps are sized correctly, spray ball covers all areas, door seals are checked, wash water levels are adequate, detergent quantities are correct for the amount of water used and that the temperature of the water delivered matches the temperature shown on the dials of the automatic wash unit.

What is milk stone?

Milk stone is a deposit with strong surface adhesion that results from milk soil - a combination of mineral and protein deposits and the by-products of bacterial growth.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in cleaning milking machines requires evidence that an individual is able to effectively identify and specify quality hygiene practices for farm dairies.

The skills and knowledge required to clean milking machines must be transferable to a different work environment. For example, candidates need to be able to operate cleaning systems from the smallest in-line system to the largest rotary dairy.

Competence also requires a demonstrated knowledge of cleaning systems and chemicals that apply to the dairy industry.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- best practice hygiene routines employed in farm dairies
- the range of bacteria affecting milk quality
- microbial testing of milk and the effect of cleaning practices on those levels
- the role of chemical concentration, physical turbulence, water temperature and contact time in the cleaning routine
- the conduct of milking machine cleaning routines
- the conduct of vat cleaning routines
- cleaning chemicals and methods
- common milking machine cleaning systems and their operation.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- assemble/disassemble milking equipment
- efficiently carry out milking equipment and vat cleaning routines
- prepare cleaning solutions in accordance with manufacturers specifications
- effectively evaluate cleaning routines for equipment and vats
- identify cleaning problems
- identify mechanical and chemical safety hazards associated with the cleaning process.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed** , in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines** . Further advice may also be sought from the relevant **sector booklet**.

RTE3314A

Unit Descriptor

Transport farm produce or bulk materials

This competency standard covers the process of legally, safely, and efficiently operating a truck and its componentry to transport farm produce or bulk materials to a required location according to a specified schedule. Loading and unloading equipment and procedures are also used. It includes the pre and post-operational checking of the vehicle as well as the basic post-operational maintenance of the vehicle, and of organisational records.

The transport of farm produce or bulk materials is likely to be carried out under limited supervision. Overall progress may be checked periodically.

The transport of farm produce or bulk materials will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment and materials, organisation of work, and services. The outcomes should be achieved within specified timelines.

Unit Sector No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Organise for the transport of farm produce or bulk materials	1.1 Briefing, hand-over details, authorisation and clearances are received, interpreted and clarified in accordance with organisational procedures and regulations. 1.2 Equipment and authorised personnel requirements are organised on time according to transportation schedule. 1.3 Operational delays are minimised through the adherence to schedule specifications. 1.4 Potential risks and hazards are identified and managed according to the work plan and within organisational procedures and regulations, OHS and other relevant legislation. 1.5 Equipment pre-operational checks are performed according to manufacturers specifications, organisational procedures, regulations, OHS and other relevant legislation. 1.6 Site environmental concerns are adhered to according to relevant legislation.

2. Load, transport and/or unload farm produce or bulk materials	2.1 Organisational OHS procedures, practices, policies and precautions are observed and followed. 2.2 Start-up, park and shutdown procedures for plant and equipment are carried out in accordance with manufacturers specifications, organisational procedures and regulations. 2.3 Load is determined in accordance with manufacturers specifications to prevent damage to equipment or loss of load. 2.4 Farm produce or bulk materials are loaded and secured in accordance with organisational procedures and regulations, manufacturers specifications, and OHS and other legislation. 2.5 Farm produce or bulk materials are transported to specified destination on time, with their condition maintained, in accordance with organisational procedures and regulations, OHS and other relevant legislation. 2.6 Vehicles follow approved transport routes and speed limits according to organisational procedures and regulations, and manufacturers specifications. 2.7 Transport of farm produce or bulk materials is carried out ensuring the safety of personnel, the vehicle, other vehicles, equipment, and the surrounding environment. 2.8 Farm produce or bulk materials are unloaded in accordance with manufacturers specifications, avoiding damage to equipment or personnel. 2.9 Where required, transport of farm produce or bulk materials are co-ordinated with harvesting machinery. 2.10 Transport of farm produce or bulk materials are completed to plan within the operating capacity of the equipment.
3. Protect farm produce or bulk materials quality	3.1 Hygiene of all surfaces in contact with farm produce or bulk materials is maintained. 3.2 Farm produce or bulk materials are protected from loss, contamination, moisture and pests during transport. 3.3 Farm produce or bulk materials are stored to prevent loss or deterioration, and in line with safe practice. 3.4 Farm produce or bulk materials storage/holding areas are maintained in a clean condition and any potentially hazardous substances are kept at a safe distance in accordance with industry practice and legislation.
4. Carry out equipment maintenance	4.1 Organisational OHS procedures, practices, policies and precautions are observed and followed. 4.2 Visual inspection and fault finding are conducted in accordance with manufacturers specifications and organisational requirements. 4.3 Routine operational servicing is conducted to ensure peak performance of equipment and according to manufacturers specifications, organisational procedures, regulations, OHS and other relevant legislation.

5. Maintain hygiene
- 5.1 Equipment is cleaned in accordance with manufacturers specifications, organisational procedures and regulations.
 - 5.2 Attachments and other ancillary equipment are cleaned and stored in accordance with manufacturers specifications, organisational procedures and regulations.
 - 5.3 All required records and documentation are completed accurately and promptly in accordance with organisational requirements

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In determining the requirements of the specific job from delivery and dispatch offices and transport authorities.	1
Collecting analysing and organising information	In relation to loading and the routes to be taken.	1
Planning and organising activities	For the safe transport of fertilisers and equipment.	1
Working with others and in teams	In completing specified activities and operations in conjunction with site personnel at both ends of the transport operation.	1
Using mathematical ideas and techniques	In observing loading limits and vehicle instrumentation, and in the calculation of time and distance.	1
Solving problems	By accessing information from supervisors and in relation to mechanical problems.	1
Using technology	In operating any necessary equipment prior to, and during, the transport operation - communication technology, calculating equipment, and measuring and recording equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What farm produce or bulk materials would be subject to transport?

Farm produce or bulk materials transported will include the entire range produced or used by the enterprise and might include grains (cereals, legumes, pulses, oilseeds, or pasture seeds), fertiliser and fodder.

What details would be included in briefing and hand-over?

The briefing may be in either verbal or written instructions and may include the nature and scope of the task, potential hazards, access road plan, survey plan, instructions, haul routes, services, resource requirements/allocations, schedule, site characteristics and requirements, materials and equipment to be used, safety requirements, and environmental considerations.

Where might the organisational procedures and regulations for transporting farm produce or bulk materials be found?

They may be found in operations manuals, induction documentation, training materials, policy and procedures documents, and as either verbal or written instructions.

What are the OHS hazards that apply to this standard?

Amongst the hazards are operating and maintaining machinery and equipment - including hydraulics and exposed moving parts, noise, organic and other dusts, working with, transporting and storing hazardous substances (such as pesticides and fertilisers), and driving on roads.

What legislation, regulations, and standards might apply to this standard?

The driver of any vehicle should be legally licensed, under the relevant State or Federal regulation, to drive/use that vehicle. In addition, a range of other legislation and regulations may apply. Amongst these are the Environmental Protection Act, environmental agencies regulations, duty of care, isolation procedures, OHS legislation, site regulations and procedures, Australian Standards, manufacturers specifications and recommendations, State Forest Codes of Practice or equivalent, statutory requirements, Trade Practices Act, and traditional landowners requirements.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below.

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment. Precautions should also be in place to minimise exposure to noise and organic and other dusts. Systems and procedures for handling and moving farm produce or bulk materials, as well as working with and around electricity, should also be in place. Speed limits and road rules in force on the property(ies) and on roads should be observed and followed.

Fixtures should be in place in all silos and storage sheds, including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used correctly, and maintained. This might include the use of self-rescue devices and respiratory devices.

Environmental conditions should be controlled e.g., keeping moisture levels within a prescribed range will reduce the likelihood of fire and silo collapse.

Procedures should be in place and used for working on top of stored farm produce or bulk materials, working with load mass movement and stability, working within confined spaces, moving vehicles, and working at height. There should also be clearly defined and communicated emergency management procedures, which detail the range of likely emergency situations, and include escape routes.

Record keeping should ensure that requirements in relation to properly observing and using product labels and Material Safety Data Sheets (MSDS), instruction manuals and written organisational procedures.

What checks should be made before, during, or after farm produce or bulk materials are transported?

Pre-start and post start-up checks should be made, including component checks such as brakes, lights, tyres, fuel, oil, water, battery, fluid levels and general condition safety checks, towing equipment, and body work.

What is included in the start-up, park and shutdown procedures?

The following activities are undertaken, or checks made:

- safety mechanisms are operational (horn, flares, operating lights), equipment is located correctly, and vehicle is left secured.

What plant and equipment would be used during the transport operation?

There is a wide range of equipment that might be used in transporting farm produce or bulk materials, amongst this might be:

- Vehicles
 - Vehicles approved for dangerous goods, support vehicles, floats, semi-trailers, and road trains, including B-doubles, trucks and trailers.
- Equipment
 - Lifting and handling equipment (winch, crane, block and tackles, pipes).
 - Generators, pumps, lights, compressors, cleaning equipment, power tools, hand tools, bulk equipment including silos, vertical and horizontal storages, temporary storage and field bins, loading and unloading equipment including augers, elevators, and belts.
- Attachments
 - Lift buckets and chutes.
- Materials
 - Witches hats, tapes, signs, flags, pegs, rope measuring tape, cutting implements, safety clothing and equipment, vehicle specification and service manuals, vehicle tools, lashing/baulking equipment and tarpaulins, vehicle logbooks and writing materials, first aid kit, fire control equipment, and breakdown gear.

In calculating the load, what aspects would be included?

The height, weight, width, and safety of the load would be considered.

What road conditions might the transport route cover?

The route may be over paddocks, local/private or public, surfaced or unsurfaced roads that could be of a variety of surface conditions. Aspects required to be dealt with might include wet spots, slope, curvature, width, shoulder condition and presence of other equipment.

Which personnel might be involved in, or affected by, the transport operation?

They might be supervisors, drivers, trades persons, maintenance staff, service personnel, contractors, inspectors, visitors, or licensed operators.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in transporting farm produce or bulk materials requires evidence that safety and regulatory standards are adhered to and that all appropriate records are kept. The correct quantities of farm produce or bulk materials should be moved with the correct equipment, to the correct location, within the scheduled timeframes.

The skills and knowledge required to transport farm produce or bulk materials must be transferable to a different work environment. For example, across a range of farm produce or bulk materials types and in both urban and rural environments.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- manufacturers and work site requirements including property conditions, and hazards on the property and on the open road
- road traffic laws
- organisational procedures for use of vehicles and equipment
- relevant OHS requirements for storage of materials and equipment
- OHS guidelines, procedures, and principles, including manual handling
- emergency procedures
- site safety requirements
- equipment safety requirements
- operational, start up, and shutdown procedures and checks
- equipment processes, technical capability and limitations
- hauling and towing procedures
- defensive driving techniques in varying traffic conditions, including urban, suburban, and rural environments
- receipt and document requirements at both ends of the transport operation
- specific requirements for the movement of fertiliser
- differences in handling and operation with bagged and bulk loads
- appropriate storage locations and conditions for fertiliser.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- plan, load, unload and move a range of loads over a full range of road conditions
- conduct pre-start and post-operational checks
- manoeuvre truck in difficult sites and conditions
- drive truck safely using all available controls
- clean and store vehicles and equipment
- identify operational faults
- complete time sheets and other maintenance records
- use communication methods to advise and anticipate conditions
- use communications equipment
- interpret plans, reports, maps, specifications
- read and interpret plans and documents
- maintain and store records, reports, and log books
- interpret ground conditions
- select, fit, and use personal and protective equipment
- operate and load a truck in accordance with Road Traffic Regulations.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3316A

Unit Descriptor

Disconnect/reconnect fixed wired equipment

This competency standard covers the process of work undertaken autonomously or in a team environment using predetermined standards of quality, safety and work procedures. Work will be preformed in situ and may include the original connection of fixed wire equipment. Disconnection of equipment may include electrical motors, modular sensing devices, and limit switches. All work and work practices will need to be undertaken to regulatory and legislative requirements. The potential dangers involved in working with electrical equipment cannot be stressed strongly enough, and the use of safe working practices are the key factor in the performance of this unit.

This unit is based on the National Metals and Engineering competency standard of the same title MEM1849A.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Disconnect equipment	1.1 Electrical characteristics of equipment and circuits are determined by reference to circuit drawings, schematics, reference manuals, equipment specifications, identification plate and/or consultation with a technical adviser. 1.2 Where appropriate, equipment characteristics are determined and recorded to standard operating procedures (SOPs), (rotation, etc). 1.3 Point/s of isolation are identified using correct and appropriate procedures. 1.4 Equipment is isolated using correct and appropriate techniques and procedures. 1.5 All lock-off equipment and signage requirements are used correctly and appropriately. 1.6 Electrical isolation is proven using correct and appropriate techniques, procedures and test equipment. 1.7 Conductor layout is noted, recorded and labelled to standard operating procedures. 1.8 Conductors are disconnected using correct and appropriate techniques, procedures, tools and equipment. 1.9 Disconnected cables/connections are terminated and made safe to standard operating procedures.

2. Connect equipment	2.1 Characteristics of the equipment to be connected are identified and connection requirements determined. 2.2 Circuit is checked for safe isolation using correct and appropriate techniques, procedures and test equipment. 2.3 Connections are checked and conductors prepared for termination using correct and appropriate tools and procedures. 2.4 Conductors are connected to equipment to specifications using correct and appropriate techniques, tools and equipment. 2.5 All cables/wires/conduit is fastened/sealed to specifications using correct and appropriate techniques, tools and equipment. 2.6 All lock-off equipment and signage is removed using standard operating procedures. 2.7 Equipment and circuit is checked and tested for compliance with specifications using correct and appropriate techniques, procedures, and tools and equipment.
3. Perform emergency first aid	3.1 Situation is assessed to identify points of danger to the injured person and potential rescuer. 3.2 Contact is made with appropriate medical and rescue authorities. 3.3 Rescue/recovery of injured person, or assistance to injured person is undertaken in accordance with recognised standards/procedures. 3.4 Details of first aid given are recorded.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Sound communication with technicians, trades people and equipment manufacturers is crucial in the performance of this unit.	2
Collecting analysing and organising information	The collation of relevant information on circuits and safe procedures should be collected and collated from a range of sources.	2
Planning and organising activities	Tasks should be scheduled so that there is minimal interruption to routine work at the site.	2
Working with others and in teams	Work will be carried out in a team environment using predetermined standards of quality and safe working procedures.	2
Using mathematical ideas and techniques	The calculation of loads, current and other electrical calculations require a range of mathematical techniques to be used.	2
Solving problems	To meet problems of electricity supply failure or major breakdown.	2
Using technology	The use of a range of instruments including multimeters as well as communications equipment is required.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What equipment is likely to be involved?

Equipment connection may include the original connection of new equipment or the disconnection of equipment for repair or replacement. Equipment may include electric motors, modular sensing devices, controllers and limit switches.

What does isolation mean?

Isolation refers to the safe disconnection of all electrical power to equipment or equipment supply circuits via switching, circuit breakers or fuses, etc., on circuits/equipment using up to 1000 volts AC or 1500 volts DC, single or multi-phase supply.

What tools are required to perform these tasks?	Correct and appropriate tools and equipment may include ammeters, voltmeters, multimeters, tong testers, etc, a range of hand tools such as pliers, screwdrivers, sockets, spanners, conduit benders, etc.
Where will this work be carried out?	The majority of situations will demand that work be carried out on-site on the farm with initial wiring of new connections carried out in the workshop prior to travelling to the work site.
What is meant by emergency first aid?	It is recommended that all individuals undertake basic first aid training up to Workplace Level II First Aid Certificate to ensure that they are competent to provide emergency care to preserve life if required.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in the disconnection and the connection of electrical equipment requires evidence that the candidate will demonstrate safe working practices in the conduct of all facets of this unit.

The skills and knowledge required to disconnect and connect electrical equipment must be transferable to a range of differing work environments. For example, work may be carried out in the workshop or more commonly in a field situation and competence needs to be demonstrated in all environments.

What specific knowledge is needed to achieve the performance criteria?	Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below: • standard operating procedures for electrical work • standards and procedures for the provision of emergency first aid • relevant OHS hazard identification, risk assessment and risk control measures • electricity and electrical theory • workshop safety and safe working practices • power supply authority requirements • electrical terminals and codes.
What specific skills are needed to achieve the performance criteria?	To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to: • use hand tools efficiently and effectively • read and interpret terminal codes • ensure compliance with electricity supply authority regulations • work safely in a range of work situations • administer emergency first aid as required.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3317A**Unit Descriptor****Carry out minor service of milking equipment**

This competency standard covers the processes of identification of faults in milking equipment by mechanical testing and safety audits and the replacement of consumable parts and components in line with programmed maintenance procedures. Competence requires the ability to disassemble and re-assemble a range of milking equipment components and effectively repair and reassemble as required. External factors influencing the performance of milking equipment may also be identified from observations of animal health and animal behaviour during the milking process.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify faults in milking machines	1.1 OHS hazards are identified, risk assessed and recorded. 1.2 Poor performance of milking equipment is identified from observations at milking. 1.3 Minor machine adjustments are carried out to rectify identified poor performance characteristics. 1.4 Fault finding and fault diagnosis is completed with minimum disruption to milking routines.
2. Identify external faults	2.1 Independent electrical appliances that impact on the farm dairy operation are identified and isolated. 2.2 Animal behaviour during milking is observed and recorded to identify abnormalities. 2.3 Earthing systems and grids are installed to minimise potential differences in the milking shed.
3. Carry out operational service & maintenance of milking machines	3.1 Machine components are cleaned, adjusted and defective parts or components repaired or replaced to bring machine up to industry performance standards. 3.2 Defective electric motors are disconnected, removed and replaced to conform to manufacturer's recommendations and OHS guidelines. 3.3 Programmed maintenance routines are completed to replace consumables and maintain lubrication in accordance with manufacturer's recommendations. 3.4 OHS hazards identified in safety audits are eliminated or risk controlled according to manufacturer's guidelines and industry standards . 3.5 Adjustments are completed to restore optimum performance of milking equipment.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	It is paramount in the performance of this unit that sound communication linkages are established with the farmer or shed operator and other milk-harvesting professionals.	2
Collecting analysing and organising information	Through collation of equipment service records and interview of the personnel associated with the shed operation.	2
Planning and organising activities	Through coordination with milking routines and using programmed maintenance and service schedules.	1
Working with others and in teams	The conduct of these activities needs to be coordinated with the operators of the shed in team environment.	1
Using mathematical ideas and techniques	The use of mathematical formulae in the calculation of milking equipment performance and adhering to programmed maintenance schedules is integral to the performance of this unit.	1
Solving problems	Problem solving including the identification of poor performance and identification of the causes is a prime focus of the performance of this unit.	2
Using technology	A range of testing and diagnostic equipment will be used in the performance of this unit.	1

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work contexts.

What OHS hazards may be identified?

OHS hazards may include exposure to moving machinery parts such as unguarded belts, pulleys or milking platforms, electrical hazards posed by faulty damaged, or poorly located electrical installations, operator hazards posed by hot water or faulty joins in pipework.

What sort of evidence would indicate poor milking performance?

Faults such as cup slip may occur as a result of low vacuum, poor pulsation, faulty pulsators, ineffective pulsation, insufficient milkline size, insufficient milkline slope, poor operator technique, poor machine configuration, and animal behaviour.

What sorts of electrical appliances or influences can cause faults?

External influences such as electric fencing, or poor earthing of other electrical components may be responsible for stray voltage problems within the shed environment.

Electronic components (12V or 24V) which will be checked with a multimeter may include pulsators, solenoids, air injectors and actuators.

What sort of animal behaviour is evidence of external faults affecting equipment performance?

Abnormal behaviour such as restlessness, tramping, kicking (including kicking off cups), frequent urination or defecation may be evidence of external influences affecting machine performance.

What sort of tasks are envisaged as a part of operational service?

Operational service is likely to include the following tasks:

- setting, adjusting and servicing pulsators
- inspecting and servicing vacuum pumps
- topping up of oil or water in vacuum pumps
- servicing of milk pumps
- cleaning and servicing of automatic cup removers
- cleaning servicing and adjusting vacuum gauges and regulators
- sizing and tensioning belts
- adjusting liner stretch
- cleaning plate cooler
- strengthening, replacing or providing new bracketing.

What are the machine components that need to be considered for inspection or service?

Machine components may include vacuum pumps, regulator, milk pumps, vacuum gauges, pulsators, entire milking systems, cup removers.

Advanced or automated equipment such as cup removers or milk meters, where fitted, should also be inspected.

What maintenance routines are required as a part of minor service of milking equipment

Maintenance routines include service and replacement, if required, of drive belts, oilers, rubberware, safety guards, unions, and stainless steel snap clamps.

What sort of adjustments would be carried out to milking equipment as a minor service routine?

Adjustment and/or replacement of belts and drive components vacuum adjustments, liner stretch adjustments, and regulator adjustment. Minor service will also include the filling of oilers and the replacement of air and other filters as required.

What are the consumables that will be replaced as a part of maintenance routines?

Rubberware such as liners, tubing and belts as well as oil wipers, grease containers, indicator globes, guides and limit switch actuators and air filters on pipework and pulsators need to be considered. Milk filters will also be replaced as a part of regular routines. All these consumables will be inspected for wear and deterioration and replaced as required.

What industry standards are used in calculating milking machine performance?

Industry minimum standards recommendations are specified by the Australian Milking Machine Trade Association and are based on the **International Standards** for Milking Machines ISO5707 *Construction and Performance* and ISO6690 *Mechanical Tests*.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in carrying out minor service of milking equipment requires evidence that an individual is familiar with a range of indicators that will be used as evidence of defective machine performance as well as an awareness of the regular maintenance routines required for milking equipment.

The skills and knowledge required to carry out minor service of milking equipment must be transferable to differing work environments. For example, they should apply to a variety of typical installations ranging from the very large rotary dairies to the smallest walk-through installation.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are as follows:

- familiarity with the components that make up milking equipment installations and their individual contributions to milking function
- common symptoms of poor milking machine performance
- symptoms demonstrated by animals in the milking environment when external problems are apparent
- routine maintenance requirements for milking equipment
- consumable replacement strategies recommended for milking equipment
- lubrication requirements for milking equipment
- industry safety standards for milking equipment installations.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complimentary skills are required. These skills include the ability to:

- observe and critically evaluate the performance of milking equipment
- operate the full range of milking equipment components
- identify common sources of air leakage
- operate hand tools and use a range of test equipment proficiently
- read and interpret operator's manuals and maintenance data supplied
- communicate effectively with the dairy farmer, milkers and other personnel to identify all contributing factors to milking equipment performance
- disassemble and assemble a range of milking equipment components such as pulsators, regulators.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3318A**Prepare combs and cutters for machine shearing****Unit Descriptor**

This competency standard covers the process of preparing combs and cutters for machine shearing to ensure they correctly cut the type and conditions of wool being removed from sheep. This work requires the ability to determine need for sharpening combs and cutters, prepare grinder and pendulum for use, carry out grinding, dress combs and report any occupational health & safety hazards to the appropriate person. Preparing combs and cutters for machine shearing requires knowledge of types of combs and cutters, terminology, techniques and procedures for grinding combs and cutters, dressing techniques, including selection of bevels, teeth thinning and polishing, and occupational health and safety policies and practices related to grinding combs and cutters.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Grind combs and cutters	1.1 Faulty components are identified and level of repair or replacement requirements are determined. 1.2 Grinder is operated in a safe manner causing no injury to operator or others and no damage to equipment. 1.3 Pendulum pin settings are adjusted and set and pendulum bar is clean and checked for level. 1.4 Grinding plates are tested visually in terms of being balanced and true. 1.5 Worn and incorrectly adhered papers are identified and replaced. 1.6 Grinder is set. 1.7 Even wear of combs and cutters is identified and combs and cutters are sharpened.
2. Dress combs	2.1 Bevel is selected and/or modified, appropriate to wool type. 2.2 Factors affecting combs selection are described in terms of type of sheep and time of the year. 2.3 Comb teeth are dressed to uniform shape and length. 2.4 Comb teeth are uniformly thinned along their length. 2.5 Comb is polished leaving no rough or sharp points.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In reporting OHS hazards to the appropriate person.	1
Collecting analysing and organising information	Through visual checking of worn components and carrying out grinding to OHS and industry standards.	2
Planning and organising activities	By observing manufacturers recommendations and/or supervisors requirements	1
Working with others and in teams	In working alongside others during shearing.	1
Using mathematical ideas and techniques	Not applicable.	-
Solving problems	By dealing with issues associated with worn or uneven combs and cutters.	1
Using technology	In use of grinding equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What variations might be used for combs?

Combs vary in bevel and the consistency of the teeth, in length, shape and thickness and steel temper.

What bevels on combs may be applicable to this unit?

Short bevel combs are used when shearing sheep that are in top condition or with thinner combs where the scallop is ground out. **Medium bevel combs** are widely used for crossbred shearing, while long **bevel combs** are more suited to fine wool sheep, for premature shearing, and for when wool is sticky.

What occupational health & safety requirements may be applicable to this standard?

Safe systems and procedures must be in place for:

- operating shearing and crutching equipment
- manual handling, including lifting and carrying
- protection from organic and other dusts
- protection against electrical hazards
- controlling and removing hazards
- providing protection from hazardous noise
- ensuring the appropriate use of personal protective clothing and equipment.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in grinding combs and cutters for machine shearing requires evidence that the leading edge of comb and cutter have been safely and correctly ground and dressed to suit the wool type and conditions in accordance with industry standards and manufacturers guidelines.

The skills and knowledge required to grind combs and cutters for machine shearing must be transferable to a different work environment. For example, this may include different wool conditions and manufacturers guidelines.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types of combs and cutters
- terminology, techniques and procedures for grinding combs and cutters
- tools and equipment used in grinding combs, and cutters and dressing combs
- occupational health and safety policies and practices related to grinding combs and cutters .

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- determine need for sharpening combs and cutters
- determine need for dressing combs
- prepare grinder and pendulum for use
- carry out grinding
- set, store and care for grinding papers
- dress combs, including selecting bevels, teeth thinning and polishing
- report any occupational health & safety hazards to the appropriate person.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3402A

Unit Descriptor

Implement animal health control programs

This competency standard covers the functions required to identify and treat internal and external parasites in animals.

It requires the application of knowledge and skills to accurately diagnose the type and severity of infection or parasite infestation and administer appropriate treatments. Competency requires an awareness of legislative requirements with regard to animal welfare. The work in this standard is likely to be carried out under routine supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for treatment of animals	1.1 Animals affected by infection or parasites are identified and the type and severity of infestation or infection is determined. 1.2 Type and scope of treatment is determined and prepared according to manufacturers specifications, OHS and industry codes of practice. 1.3 Equipment and materials required for the treatment of animals are prepared to manufacturers specifications and enterprise requirements. 1.4 Treatment site is prepared to industry standards according to enterprise requirements. 1.5 Existing and potential hazards in the workplace are recognised, risk assessed and controlled according to OHS requirements.
2. Treat animals	2.1 Suitable personal protective equipment is selected, used and maintained according to OHS requirements. 2.2 Animals are safely handled and restrained without causing harm or injury to animal or handler. 2.3 Treatment is administered hygienically and consistently according to manufacturers specifications, OHS and industry codes of practice. 2.4 Withholding periods are observed and treated animals are identified to ensure isolation from non-treated animals. 2.5 Animals are counted out, prepared and moved along a planned route without damage to person, property or environment.

3. Complete treatment process
 - 3.1 Animal health and condition are monitored post-treatment and abnormalities reported according to enterprise requirements.
 - 3.2 **Environmental implications** associated with the treatment of animals are identified, assessed and controlled according to enterprise requirements.
 - 3.3 Equipment and worksite are cleaned and waste, including **animal residues**, is disposed of according to OHS and enterprise requirements.
 - 3.4 Health treatments are **stored** to manufacturers recommendations, industry and enterprise requirements.
 - 3.5 **Relevant information** is documented according to industry and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to evidence of parasitic infection may be discussed and confirmed with veterinary medicine suppliers and animal health personnel.	1
Collecting analysing and organising information	Information on animal testing may be collected and organised by reports for future analysis of parasite control and management.	2
Planning and organising activities	The treatment process may be planned and co-ordinated with work schedules and timeframes or sequenced as required.	2
Working with others and in teams	In the application of methods and procedures to complete the treatment program within timeframes and deadlines.	1
Using mathematical ideas and techniques	Mathematical techniques may be used to calculate treatment dosage and rates for the severity of the infection or infestation.	1
Solving problems	Problems of large infestations or disease outbreaks may be resolved by isolation procedures.	1
Using technology	Technology may be used to communicate, source information and to estimate levels of infection or infestation.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What types of animals may be covered by this standard?	This may include sheep, goats, pigs, dairy and beef cattle.
What types of infections or parasites does this unit cover?	This may include lice, biting lice, sucking lice, ticks, blowfly, itch mite, mange, worms, bacteria, viruses or fluke.
What factors may be considered in determining and preparing animal treatments?	This may include assessing the dosage and rates appropriate to the identified type and severity of infestation or infection, the selection of a chemical that doesn't cause fleece/fibre contamination and residues in milk. It may also involve checking the expiry dates on health preparations for validity.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • operation of equipment • hazard and risk control • handling animals including zoonoses control • manual handling, including lifting and carrying • protection from hazardous noise and organic and other dusts • handling and storage of hazardous substances • outdoor work including protection from solar radiation • appropriate use of personal protective equipment.
What range of equipment and materials may be prepared for use?	This may include syringes, antibiotics and vaccinations, drench guns, overhead gantry, yards, drenches, scales, races, gates, backpacks, faeces collection plastic bags, plastic globes, sample jars, portable coolers, kits supplied by the Department of Agriculture, hand shears, jetting hand piece, water pump, temporary yards, portable plunge dips, sharpening stone, jetting race, tanks, spray dips/shower dips, plunge dips and portable crutching equipment. Preparation may include the calibration of equipment to check accuracy of dose rates.
What enterprise requirements may apply to this standard?	Standard operating procedures (SOPs), enterprise quality assurance manual, industry standards and quality assurance programs, Total Quality Management standards, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use) and reporting requirements.

What may be involved in preparing the treatment site?	The place of treatment may include yards, plunge dips, jetting races, in paddock, in piggery, spray dips/shower dips. Preparation may involve cleaning and determining the method of site drainage.
What existing and potential hazards may be encountered in the workplace?	Animal movement and handling, exposure to hazardous noise, dust and solar radiation and veterinarian chemicals, and zoonotic diseases.
What personal protective equipment may be relevant to this standard?	This may include boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection.
What might be involved in animal restraint procedures?	Procedures may involve the use of industry accepted animal restraint equipment in conjunction with safe and humane handling techniques.
What may be involved in the preparation and movement of animals?	This may include giving animals time to settle post-treatment, conducting the move in a controlled and quiet manner to correct paddock or sickbay.
What environmental implications may be relevant to this standard?	Negative environmental impacts may result from the unsafe use and disposal of veterinarian chemicals (dipping, jetting, parasite control) and any consequent residual chemicals. Impacts may also result from high concentrations of animals on ground cover causing run-off flows, loss of ground cover, soil disturbance, pugging, dust problems, weed seeds in animal manure, contamination of ground and surface water supplies, and odours.
What type of animal residues may be disposed of?	This may include fly blown fleece, maggots and chemical residues.
What storage requirements may be observed?	Storage requirements may include safety, access, warning signs, temperature control, and security for spillage.
What relevant information might be recorded and reported?	This may include details of equipment and materials used, the performance of equipment, faults and malfunctions, number of treated livestock and details of treatment, any testing carried out and results, evaluation of treatment effectiveness and observed abnormalities or behaviour in livestock.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to implement effective preventative health regimes for the control of parasites. It involves the ability to safely handle animals, determine the type and scope of treatment, observe withholding periods, and monitor animals for treatment effectiveness and abnormalities. Competence must be demonstrated in safe and positive environmental workplace practices.

The skills and knowledge required must be transferable to another environment. For example, if competence is evident in carrying out a parasite control program for sheep, it must also be evident that these skills may be adapted to a program for goats and beef cattle.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- application procedures and effects of veterinary chemicals
- types of health preparation treatments
- enterprise vaccination program and procedures
- identification of and prescribed treatments for infections and infestations
- livestock health and nutritional requirements
- types of parasite infestation and their symptoms
- grazing management strategies used in internal parasite control
- requirements for the preparation and transportation of faecal samples
- drenching equipment, drenches and their efficiency
- relevant codes of practice with regard to the safe use and handling of hazardous substances
- withholding periods for treated animals
- animal handling and restraint techniques
- OHS legislative requirements
- relevant codes of practice with regard to environmental protection.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- select and apply chemicals appropriate to treat infections and infestations
- collect faecal, tissue or blood samples for laboratory analysis samples
- treat rectal prolapse
- select and prepare livestock for culling
- arrange and co-ordinate equipment and resources
- weigh and drench livestock
- assemble, check and calibrate drenching equipment
- demonstrate safe and environmentally responsible workplace practices
- provide due care and humanely handle animals
- return animals to prepared and clean environments
- identify the symptoms of parasite infestation
- read and interpret chemical and veterinary health labels, manufacturers specifications and MSDS
- communicate verbally with the work team and the manager
- calculate animal numbers and measure treatment dosage and rates.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3406A

Unit Descriptor

Implement vertebrate pest control program

This competency standard covers the functions required to plan and implement a strategy for the control of vertebrate pests in a rural environment.

It requires the application of knowledge and skills to assess the severity of pest infestation and determine methods and applications for the effective control of vertebrate pests without harm to other species or the environment. Competency requires an awareness of legislative requirements with regard to animal welfare, biosecurity, safety and environmental protection. The work in this standard is likely to be carried out under routine supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Assess requirements for pest control	1.1 Vertebrate pest control requirements are assessed and clarified according to enterprise objectives. 1.2 Inspections are carried out to ascertain type and severity of pest infestations. 1.3 Control agents and methods of application to prevent, control or manage vertebrate pests are determined. 1.4 Control program is developed for implementation according to enterprise requirements .
2. Prepare to implement control program	2.1 Suitable personal protective equipment is selected, used and maintained according to OHS requirements. 2.2 Equipment and materials required to support the implementation of control program are arranged. 2.3 Relevant licenses and permits are obtained according to legislative requirements . 2.4 Safe working practices are observed and followed according to OHS and enterprise requirements.
3. Control vertebrate pests	3.1 Control program is implemented according to OHS, legislative and enterprise requirements. 3.2 Safeguards are employed to ensure that targeted pests are controlled and all other species remain unharmed. 3.3 Integrated health management is considered and implemented as required. 3.4 Environmental impacts are assessed and controlled according to legislative and enterprise requirements.
4. Complete control program	4.1 Carcasses and control agents are disposed of according to environmental and industry Codes of Practice. 4.2 Control program and outcomes are reviewed and evaluated for future best practice and planning management. 4.3 Equipment and work areas are cleaned and returned to operating order according to OHS and enterprise requirements. 4.4 Relevant information is documented and maintained to industry standards and enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Information with regard to implementation of the control program and authorisation requirements may be obtained from regulatory authorities and property managers.	2
Collecting analysing and organising information	Information with regard to the identity of vertebrate pests, location and severity of infestation may be collected and organised by reports for future analysis.	2
Planning and organising activities	Assessment and monitoring processes of vertebrate pest problem may be planned and co-ordinated with control program or sequenced as required.	2
Working with others and in teams	In the application of effective methods and procedures to implement the control plan and achieve enterprise objectives within specified timeframes.	2
Using mathematical ideas and techniques	Mathematical techniques may be used to calculate dosage and levels of infestation.	2
Solving problems	Problems of diverse pest infestations may be resolved by additional personnel to assist with implementation of program.	2
Using technology	Technology may be used to communicate and record data with regard to control program.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

What types of vertebrate pests may be identified for control?

Vertebrate pests are those animal species listed in specific regions by governments or councils as pest animals and may include animal species such as wild birds, rats and mice, feral cats, feral pigs, foxes. Vertebrate pests to be controlled may also be identified in biosecurity codes of practice.

What range of control agents may be used?	Agents may include herbicides, fungicides, insecticides, mechanical means including shooting, trapping or electric devices, vaccines, antibiotics, medicines, poisons, baits, vector release, biologically active agents, growth regulators and ripping warrens.
What application methods may be used?	Methods may include by air or ground, by injection, ripping warrens, drench, spray or fumigation. It may also include integrated pest management which includes one or more methods in combination: • cultivation or mechanical means • biological control • species selection • chemical application.
What information may be included in a control program?	Information may include the identity of vertebrate pest and severity of infestation, allocated equipment and materials, type of control agent to be used and method of application, timeframe for completion, health and safety measures, procedures for the disposal of carcasses and other waste, and reporting requirements.
What enterprise requirements may apply to this standard?	SOP, industry standards, Total Quality Management standards, enterprise quality manual, product labels, manufacturers specifications, MSDS, operators manuals, enterprise policies and procedures (including waste disposal, recycling and re-use) and reporting requirements.
What personal protective equipment may be relevant to this standard?	This may include boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection.
What OHS requirements may be relevant to this standard?	Safe systems and procedures for: • safe manual handling • outdoor work including protection from solar radiation • the handling and storage of firearms • the handling of explosives • the handling of hazardous substances including vaccines, poisons and baits • the use of personal protective equipment.

What legislative requirements may be applicable to this standard?

This may include relevant State/Territory Acts, Regulations, Australian Standards and Codes of Practice with regard to:

- pest control
- use, control and storage of chemicals
- atmospheric contamination
- labelling of hazardous substances
- MSDS information guidance
- transportation of dangerous goods.

What safe working practices may be observed?

This may include identifying hazards, mixing and applying chemicals, appropriate signage, manual handling and the use of personal protective equipment.

What considerations of integrated health management may be relevant to this standard?

Considerations may include hygiene, husbandry, quarantine, chemical and biological controls.

What environmental impacts may be relevant to this standard?

Negative environmental impacts may result from the unsafe use and disposal of chemicals and any consequent residual chemicals.

What relevant information might be recorded and reported?

This may include details of control agents used and methods of application, location and severity of infestation, carcass numbers and disposal procedures, implementation problems and solutions, any incidents, and evaluated outcomes in terms of meeting enterprise objectives.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this standard requires evidence of the ability to safely use control agents and apply appropriate methods to control vertebrate pests. It requires the ability to safely use and handle hazardous substances, carry out inspections to assess infestations, identify species and nature of vertebrate pest, determine control methods with due care and humane treatment, and dispose of carcasses according to established industry standards.

The skills and knowledge required must be transferable to another environment. For example, this could include different pests, control treatments, enterprises and workplaces.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- Legislative and industry requirements for the disposal of vertebrate pests and control agents
- Types of vertebrate pests
- Control methods and techniques
- Safety signage
- Sustainable livestock management
- Relevant provisions of Native Vegetation Acts with particular attention to potential soil degradation and destruction of flora and fauna
- Relevant provisions of OHS legislation and regulations.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- Use a first aid kit
- Select and use agricultural chemicals safely
- Communicate effectively in verbal and written form with enterprise personnel and suppliers
- Read and interpret chemical labels, MSDS and safety signage or decals
- Calculate vertebrate pest numbers and estimate resources and materials appropriate to implement control program.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3504B**Collect samples for rural production or horticulture monitoring program****Unit Descriptor**

This unit of competency specifies the outcomes required to collect samples as part of a rural production or horticulture monitoring program or while conducting post-mortem examination of livestock or other animals. It requires the ability to plan for collecting, prepare equipment and resources, carry out collecting, and complete collecting activities. Collecting samples requires knowledge of standard operating procedures (SOPs); industry sampling and preserving methods, guidelines and protocols; types of material that might be collected; and environmental legislation.

Samples collected will usually be analysed by laboratory staff, although collection staff may undertake some tests.

Employability Skills

This unit contains employability skills.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Plan for collection of samples.	1.1 Purpose and scope of sample collection activity is confirmed from discussion with supervisor or work instructions. 1.2 Sample collection schedule is read/heard and confirmed. 1.3 Sampling site location is confirmed and, where required, approval obtained for site access following enterprise guidelines. 1.4 Samples to be collected and preserved are identified in conjunction with supervisor or by reference to enterprise guidelines or SOPs. 1.5 Range of likely operating conditions, hazards and difficult/sensitive environments are assessed for impact on sampling and testing.
2. Prepare equipment and resources.	2.1 Equipment required for sampling and preserving is sourced according to sampling procedures. 2.2 Equipment is checked for availability and serviceability in accordance with enterprise procedures. 2.3 Data or record sheets/books are collected for use. 2.4 Equipment, data sheets and personnel are moved to sampling sites without injury or damage and readied for use.

3. Carry out sampling and preserving procedures.	3.1 Samples are collected in accordance with sampling plan and enterprise procedures and industry protocols/guidelines. 3.2 Samples are preserved and recorded in accordance with sampling standards and guidelines. 3.3 Samples for external analysis are prepared, packaged and sent to laboratory in accordance with sampling schedule and laboratory standards. 3.4 Hazardous materials are packaged and transported in accordance with legislative requirements . 3.5 Observations including information on the surrounding area and environmental conditions are made in accordance with monitoring schedule. 3.6 Equipment operation and work practices conform to OHS requirements . 3.7 Collection outcomes including presentation of samples are reported and delivered in accordance to enterprise guidelines.
4. Complete sample collection activities.	4.1 Equipment and clothing is cleaned, sanitised, repaired and stored in accordance with enterprise procedures. 4.2 Damaged or malfunctioning equipment is repaired on site or sent to manufacturer or specialist. 4.3 Sampling results and observations are accurately recorded on data sheets and forwarded in accordance with enterprise procedures. 4.4 Changes in field conditions and sampling protocols are reported according to enterprise procedures.

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- distinguish atypical circumstances
- package samples for transport to laboratory
- prepare samples
- understand and carry out instructions
- use and operate relevant tools and equipment.

Required knowledge:

- basic habitat assessment
- collecting equipment and methods
- fauna and flora recognition relevant to sampling activities
- field procedures for sampling and preservation
- hydrological cycle
- preservation equipment and processes
- relevant legislation
- topographical, climatic and/or environmental influence on material or sampling procedure
- water quality issues.

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

What sampling site <i>locations</i> may be relevant?	Rural production or horticultural sites, such as paddocks, farm buildings, worksites, nurseries, playing fields, dams, etc.
What types of <i>samples</i> may be included?	A very wide variety of items may be sampled for testing, including animal tissue or fluids, plants, moulds, pests, water, soil, manures, artificial growth media, fertilisers, hydroponic solutions, effluent, and emissions. Samples will generally be taken as part of an on-going monitoring program, such as an animal health program or as part of a post-mortem examination of livestock, or soil monitoring for crop and pasture production
What <i>environmental legislation</i> may be included?	Environmental legislation may include Fisheries Management Acts, Environmental Protection Acts, and threatened species conservation Acts.
What <i>equipment</i> may be included?	Electronic machines, probes, grabs, nets, dredges, plankton nets, water sample bottles, bailer, still and video cameras, specialised machinery, identification keys and preserving equipment, kick seines, containers for holding and sorting samples, plastic buckets, blood/saliva sampling equipment, hand-held magnifying glasses, tweezers or forceps, small vegetable brushes, wading boots, rubber gloves, thermometer, yardstick, sample record and assessment form, pencils, and clipboard, and relevant field guides.
Which <i>OHS requirements</i> may be included?	Codes of practice, regulations and/or guidance notes, which may apply in a jurisdiction, and enterprise-specific OHS procedures, policies or standards.

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

What evidence is required to demonstrate competence for this unit as a whole?

Competence in collecting and preserving biological samples requires evidence that samples have been appropriately collected and preserved for a given site according to prescribed enterprise procedures, standards and principles, collecting schedules and industry best practice. The skills and knowledge required to collect and preserve samples must be **transferable** to a range of work environments and contexts. For example, this could include different locations, environments, samples and collecting techniques or sample collection for different purposes.

What processes should be applied to this unit of competency?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this unit of competency. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

- How can communication of ideas and information (3) be applied?
 - Recording information regarding collection and preservation activities.
- How can information be collected, analysed and organised (3)?
 - Through completion of record sheets, taking of samples for external analysis and recording of observations.
- How are activities planned and organised (3)?
 - Using appropriate equipment and in accordance with enterprise guidelines.
- How can team work (3) be applied?
 - Cooperation with others in collecting and preserving activities.
- How can the use of mathematical ideas and techniques (2) be applied?
 - Through recording scope and extent of activities and samples collected, using results, and reporting according to enterprise guidelines or SOPs.
- How can problem-solving skills (3) be applied?
 - Dealing with unforeseen situations when carrying out collecting and/or preserving.
- How can the use of technology (2) be applied?
 - Use of field equipment and machinery.

Are there other units of competency that could be assessed with this one?

This unit of competency could be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this unit of competency for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these units of competency must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3506A

Unit Descriptor

Monitor weather conditions

This competency standard covers the process of monitoring and interpreting weather and climate conditions and assessing its likely impact on staff, crops, livestock, produce, property, natural resources, equipment and work tasks. Competency also requires the application of skills and knowledge to prepare for adverse weather and climate conditions, to change livestock and crop management programs and work tasks as appropriate, to minimise loss and damage and to continue to monitor and record weather and climate information. The work is likely to be carried out with limited or minimal supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Interpret weather and climate information	1.1 Weather and climate information and warnings are regularly monitored to determine likely conditions. 1.2 Potential variations in weather and climate conditions are anticipated and assessed according to warnings, weather patterns and historical experience. 1.3 Possible impacts of weather and climate on crops, livestock and work tasks are identified to determine appropriate preventative action. 1.4 Suitable preventative actions are reviewed to ensure availability of appropriate resources and responses.
2. Carry out preventative action	2.1 Information and advice is promptly disseminated to relevant personnel . 2.2 Preventative action is determined according to the known effects on livestock, crops and work tasks. 2.3 Actions to minimise loss and damage are implemented. 2.4 Livestock or crop management program and work schedules are adjusted and revised according to climatic changes.
3. Monitor weather and climate	3.1 Regular updates are accessed to determine the ongoing suitability of current programs. 3.2 Viability of livestock and crop management practices and scheduling of work tasks are reviewed to ensure suitability within meteorological conditions. 3.3 Research on forecasting techniques is undertaken to maintain currency of information. 3.4 Relevant information is documented and recorded according to enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In discussing conditions and changes with weather and climate information agencies and colleagues.	2
Collecting analysing and organising information	In analysing and interpreting data from weather and climate information sources on weather predictions and changes.	2
Planning and organising activities	To plan activities and resources to minimise impact of adverse weather and climate on livestock, crops and staff.	2
Working with others and in teams	To collate all available information on weather and climate and to organise resources and minimise loss and damage.	2
Using mathematical ideas and techniques	To analyse and interpret weather and climatic condition and changes in weather and climate.	2
Solving problems	To minimise impact of adverse weather and climate and to implement appropriate tactics and strategies when weather and climate changes unexpectedly.	2
Using technology	To access a range of information resources and record information.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work situations available.

Where might weather and climate information be sourced?

Radio, television, internet, e-mail, fax, telephone, newspapers, word-of-mouth, weather station on property, and interpretive tools.

What might weather and climate information include?

Reports, warnings, data collected from property weather station, and grazier alerts.

What warnings might be issued or relevant?

Fire, flood, wind, rain, hail, storm, cyclones, gale, snow, dust, frost, heat wave, grazier alerts, rapid changes in temperature or weather conditions.

What preventative actions might be reviewed?	Provision of shelter, shedding sheep and moving stock, covering or moving fodder, fire fighting equipment and preparing firebreaks, auxiliary power, supplies, securing equipment and buildings, assuring water supply and rescheduling work tasks.
Who might be considered to be relevant personnel?	Other staff and colleagues, owners and managers, and neighbours.
What loss and damage needs to be minimised?	Staff, livestock, crops, fodder, and produce, buildings sheds and/or other physical resources.
Where might regular updates be obtained?	Radio, television, internet, e-mail, fax, telephone, newspapers, word-of-mouth, weather station on property, and interpretive tools.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in monitoring weather and climate conditions requires evidence of the ability to monitor and interpret weather and climate information, communicate warnings and concerns, identify resource requirements and dangers. In addition, it requires an ability to minimise loss and damage to staff, livestock, crops, natural resources, property, and produce and to implement alternative livestock or other programs and continue to monitor weather changes.

The skills and knowledge required to monitor weather and climate conditions must be transferable to another rural workplace. For example, if competence is evident in monitoring weather and climate conditions for a large sheep property it should also be evident for a small cattle property or a different climatic zone.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- working knowledge of climate and weather
- weather and climate conditions and its impact upon farming and grazing activities
- effects of wind and rain on wind chill
- relevant legislative health and OHS requirements especially as they relate to weather and climate monitoring and preparations for hazardous weather
- enterprise and industry policies for monitoring weather and climate conditions and recording and reporting weather and climate conditions.

If applicable to the activities of the enterprise:

- effects of shearing and/or parturition and wind chill exposure
- effects of wind chill on metabolism of animals
- effects of prolonged dry periods on pastures and animal production and natural resources.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- relate forecasts to impact on current operations and activities
- relate weather and climate conditions and changes to decision-making and prevention of loss and damage
- monitor physical signs in the context of available information
- communicate information.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3601A

Unit Descriptor

Install irrigation systems

This competency standard covers the process of installing pressurised irrigation systems. It requires the ability to organise resources for installation work, set out and prepare site, install irrigation components, complete installation work, commission irrigation systems and communicate with work team members, supervisors, contractors and consultants. Installing irrigation systems requires knowledge of methods and techniques of irrigation, components of an irrigation system, behaviour of water on varying terrain and soil types, soil water retention testing techniques and soil characteristics, and enterprise OHS procedures.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Organise resources for installation work	1.1 Materials, tools, equipment and machinery are selected according to the irrigation system design requirements and enterprise work procedures. 1.2 The construction site for the irrigation system and construction method is identified according to the site and irrigation system plans and enterprise work procedures. 1.3 Parts and equipment delivered to site are checked according to system drawings and specifications. 1.4 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 1.5 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.6 Suitable safety and personal protective equipment (PPE) are selected, used and maintained. 1.7 Water supply is checked to ensure that it is compatible with system specifications.
2. Set out and prepare site	2.1 Measurement and marking out of irrigation lines are consistent with the plan. 2.2 Trenches where constructed are at the specified depth without damage to services, facilities, features and established plants. 2.3 Equipment operation and work practices conform to enterprise and legislative OHS requirements. 2.4 Regulations and legislation relevant to the situation are observed. 2.5 Work practices reflect sustainable horticulture principles and respond to local community requirements.

3. Install irrigation components	3.1 Plan is interpreted and where applicable, contractors are supervised and work is monitored to conform to the plan. 3.2 Components are assembled and connected according to the plan, joints are completed and tested according to manufacturers specifications. 3.3 Fittings and valves are fitted and adjusted to the requirements of the installation plan, and all joints are secured according to enterprise guidelines. 3.4 A clean and safe work area is maintained while installation work is carried out. 3.5 Tools appropriate to the task being undertaken are chosen and used according to guidelines and safe working practices are employed.
4. Complete installation work	4.1 Earthworks are finished off to plan specifications and enterprise work procedures. 4.2 The system configuration and capacity matches the installation plan. 4.3 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures. 4.4 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures
5. Commission irrigation system	5.1 Start-up sequence is in accordance with operations manual. 5.2 System is flushed as required. 5.3 Operating faults are identified and corrective actions taken according to the operations manual. 5.4 Testing and monitoring equipment are calibrated to manufacturers specifications. 5.5 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information with the work group, supervisor, contractors or consultants relating to installation activities and problems.	1
Collecting analysing and organising information	Enterprise work procedures and site and irrigation system plans should be consulted, interpreted and applied to co-ordinate installation activities with further clarification sought from the supervisor when necessary.	1
Planning and organising activities	Co-ordinating work activities for the work group, contractors and self, prior to and during the installation program.	1
Working with others and in teams	Facilitating and leading work group members to complete the installation to specification.	1
Using mathematical ideas and techniques	Measuring materials and interpreting specifications for the irrigation installation.	1
Solving problems	Dealing with problems imposed by site characteristics or when system operation doesn't meet specifications.	1
Using technology	Applying design specifications, communicating and keeping records.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What materials may be required to install a drainage system?

Materials may include irrigation system components, glues, welds, and construction and backfill materials.

What tools, equipment and machinery may be required?	Tools, equipment and machinery may include surveying and levelling equipment such as automatic level, laser level, dumpy level, Cowley level, staff, boning rods, pegs, notebook, pencil and calculator; hand tools such as rakes, shovels, spades, rollers, wheelbarrows, hoses and hose fittings; machinery such as bobcats, ditch witches, backhoes, front-end loaders, graders, mechanical rollers, trucks, hydraulic trailers, and tractors and 3-point linkage equipment, pumps and pump fittings, and fitting and welding tools appropriate to the irrigation system.
What irrigation systems may apply to this standard?	Irrigation systems may include mains pressure, low pressure, below ground, above ground, spray systems, dripper, and capillary systems.
What enterprise work procedures may apply to this standard?	Work procedures may include supervisors oral or written instructions, installation program, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes, product labels and Material Safety Data Sheets (MSDS), manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.
What irrigation equipment may apply to this standard?	Irrigation equipment may include pumps, motors, delivery equipment, sprays, system controllers, injectors, tensiometers, probe tubes, flow meter, pressure gauge, computer and/or other scheduling devices, recycling equipment, and spray equipment.
What OHS hazards may be associated with the installation of drainage systems?	Hazards may include disturbance or interruption of services, solar radiation, dust, noise, soil and waterborne micro-organisms, chemicals and hazardous substances, manual handling, moving vehicles, machinery and machinery parts, uneven surfaces and flying and falling objects.
What safety equipment may be required?	Safety equipment may include signage and barriers.
What PPE may be required to install drainage systems?	PPE may include hat, boots, overalls, gloves, goggles, respirator or face mask, face guard, hearing protection, sunscreen lotion and hard hat.
What types of water supplies are covered by this standard?	Water supplies may be underground, mains or surface storage including fixtures such as dams, bores, windmills, tanks, and channels.

What OHS requirements may be relevant to this standard?

OHS requirements may include identifying hazards, assessing risks and implementing controls, cleaning, maintaining and storing tools, equipment and machinery; appropriate use of PPE including sun protection, safe operation of tools, equipment and machinery, safe handling, use and storage of chemicals and hazardous substances, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.

How may a clean and safe work area be maintained?

Tasks may include disabling unused tools, equipment and machinery and storing neatly out of the way of installation activities, safely storing materials on site, using signage and safety barriers during and removing after construction activities are completed, and swiftly and efficiently removing and processing debris and waste from the work area.

What waste material may be relevant to this standard?

Waste material may include unused construction and excavated materials, and plant debris, litter and broken components.

Plant-based material may be mulched or composted, plastic, metal, paper-based materials may be recycled, re-used, returned to the manufacturer or disposed of according to enterprise work procedures.

Waste may be removed to designated areas for recycling, reuse, return to the manufacturer or disposal.

What testing equipment may be relevant to this standard?

Testing equipment may include pressure gauges and flow meters.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in installing an irrigation system requires evidence that a person is able to prepare for installation, set out the installation works, install and test the irrigation system, and clean up the site.

The skills and knowledge required to install an irrigation system must be transferable to a different work environment. For example, this could include different types of irrigation systems and components, water supplies, soil types and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- methods and techniques of irrigation
- components of an irrigation system
- characteristics and operation of joints, valves and sprinkler components
- operation of pumps and water flow rates
- behaviour of water on varying terrain and soil types
- soil water retention testing techniques
- water quality and water filtration techniques
- calculations for installing irrigation systems
- soil characteristics
- enterprise OHS procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- organise resources for installation work
- set-out and prepare site
- install irrigation components
- complete installation work
- commission irrigation system
- communicate with work team members, supervisors, contractors and consultants
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3603A

Unit Descriptor

Install drainage systems

This competency standard covers the process of installing surface and/or subsurface drainage systems. It requires the ability to interpret site specifications and drainage system plans, set out drainage system works, measure materials, level and align earthworks, and use relevant equipment, tools and machinery. Installing surface and/or subsurface drainage systems requires knowledge of the purposes of drainage systems and the application of drainage system plans to the physical situation, drain types, components and installation techniques, soil characteristics, and enterprise OHS procedures.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for drainage system installation activities	1.1 The construction site for the drainage system and construction method is identified according to the site and drainage system plans and enterprise work procedures. 1.2 Materials, tools, equipment and machinery are selected according to drainage system design requirements and enterprise work procedures. 1.3 Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise work procedures. 1.4 OHS hazards are identified, risks assessed, controls implemented and reported to the supervisor. 1.5 Suitable safety and personal protective equipment (PPE) are selected, used and maintained.
2. Co-ordinate installation work	2.1 Enterprise work team, contractors and design consultants are identified and work tasks are co-ordinated in a sequential, timely and effective manner in consultation with the supervisor. 2.2 Installation of the drainage system is undertaken according to OHS requirements and with due consideration of the environmental implications and relevant legislation and regulations. 2.3 A clean and safe work area is maintained throughout and on completion of work.
3. Prepare the site for installation of drainage system	3.1 Symbols and terminology are interpreted to ensure the concept of the drainage system plan is clearly understood according to industry practice. 3.2 Layout of services is identified, depths checked against the site or drainage system plan and discrepancies are reported to the supervisor and the relevant authority. 3.3 Survey, measurement and marking out of the site and confirmation of soil characteristics relevant to the planned drainage system are completed according to plan specifications and enterprise work procedures.

4. Undertake installation of drainage system	4.1 Excavations are completed without damage to services, facilities, features and established plants according to plan specifications and enterprise work procedures. 4.2 The drainage system is installed according to the drainage system plan and enterprise work procedures. 4.3 The drainage system is tested for configuration, flow rates and capacity consistent with the drainage system plan and according to enterprise work procedures. 4.4 The supervisor is consulted and remedial action is taken when the drainage system operation does not meet the plan specifications.
5. Complete installation of drainage system	5.1 Earthworks are finished off to the plan specifications and enterprise work procedures. 5.2 The site is restored and waste material is removed from the site and disposed of in an environmentally aware and safe manner according to enterprise work procedures. 5.3 Tools, equipment and machinery are cleaned, maintained and stored according to enterprise work procedures. 5.4 Work outcomes are recorded or reported to the supervisor according to enterprise work procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Written, oral and telecommunication of ideas and information with the work group, supervisor, contractors or consultants, relating to installation activities and problems.	1
Collecting analysing and organising information	Enterprise work procedures and site and drainage system plans should be consulted, interpreted and applied to co-ordinate installation activities with further clarification sought from the supervisor when necessary.	1
Planning and organising activities	Co-ordinating work activities for the work group, contractors and self, prior to and during the installation program.	1
Working with others and in teams	Facilitating and leading work group members to complete the installation to specification.	1
Using mathematical ideas and techniques	Measuring materials and interpreting specifications for the drainage installation.	1
Solving problems	Dealing with problems imposed by site characteristics or when the system operation doesn't meet specifications.	1
Using technology	Applying design specifications, communicating and keeping records.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What drainage systems may apply to this standard?

Drainage systems may include surface drains, culverts, mole drains, sand slit, sub-surface traps, pit and trap systems, dune and swale systems, reed beds, water-recycling pumps and baffles.

What enterprise work procedures may apply to this standard?	Work procedures may include supervisors oral or written instructions, installation program, enterprise standard operating procedures (SOPs), specifications, routine maintenance schedules, work notes, product labels and Material Safety Data Sheets (MSDS), manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.
What materials may be required to install a drainage system?	Materials may include drainage system components, glues, welds, construction materials for drain surfaces and slopes, and backfill materials.
What tools, equipment and machinery may be required?	Tools, equipment and machinery may include surveying and levelling equipment such as automatic level, laser level, dumpy level, Cowley level, staff, boning rods, pegs, notebook, pencil and calculator; hand tools such as rakes, shovels, spades, rollers, wheelbarrows, hoses and hose fittings; machinery such as bobcats, ditch witches, backhoes, front-end loaders, graders, mechanical rollers, trucks, hydraulic trailers, and tractors and 3-point linkage equipment; pumps and pump fittings; and fitting and welding tools appropriate to the drainage system.
What OHS hazards may be associated with the installation of drainage systems?	Hazards may include disturbance or interruption of services, solar radiation, dust, noise, soil and waterborne micro-organisms, chemicals and hazardous substances, manual handling, moving vehicles, machinery and machinery parts, uneven surfaces and flying and falling objects.
What safety equipment may be required?	Safety equipment may include signage and barriers.
What PPE may be required to install drainage systems?	PPE may include hat, boots, overalls, gloves, goggles, respirator or face mask, face guard, hearing protection, sunscreen lotion and hard hat.
What OHS requirements may be relevant to this standard?	OHS requirements may include identifying hazards, assessing risks and implementing controls, cleaning, maintaining and storing tools, equipment and machinery, appropriate use of PPE including sun protection; safe operation of tools, equipment and machinery, safe handling, use and storage of chemicals and hazardous substances, correct manual handling, basic first aid, personal hygiene and reporting problems to supervisors.

What environmental implications may be associated with the installation of drainage systems?

Restructuring and creation of slopes for drainage purposes may affect the run-off and flow rates of stormwater and excess irrigation water from the site, which may have beneficial or adverse impacts on the external environment. Drainage systems may also enable the enterprise to store and recycle storm and grey water for re-use within the enterprise, thereby reducing detrimental impacts on the external environment such as salinisation, waterlogging and erosion.

How may a clean and safe work area be maintained?

Tasks may include disabling unused tools, equipment and machinery and storing neatly out of the way of installation activities; safely storing materials on site; using signage and safety barriers during construction and removing them after activities are completed, and swiftly and efficiently removing and processing debris and waste from the work area.

What services may need to be located?

Services may include water supply, gas, power (electricity), telecommunications, irrigation, stormwater and drainage.

What waste material may be relevant to this standard?

Waste material may include unused construction and excavated materials, and plant debris, litter and broken components.

Plant-based material may be mulched or composted, plastic, metal, paper-based materials may be recycled, re-used, returned to the manufacturer or disposed of according to enterprise work procedures.

Waste may be removed to designated areas for recycling, reuse, return to the manufacturer or disposal.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in installing a drainage system requires evidence that a person is able to prepare for installation activities, set out, survey, test and excavate the installation site, install and test the drainage system, and clean up the installation site.

The skills and knowledge required to install a drainage system must be transferable to a different work environment. For example, this could include different types of drainage systems, soil types and enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the purposes of drainage systems and the application of drainage system plans to the physical situation
- drain types, components and installation techniques
- environmental impacts of irrigation and drainage systems
- soil characteristics
- enterprise OHS procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate with work team members, supervisors, contractors and consultants
- interpret site specifications and drainage system plans
- set out drainage system works
- measure materials
- level and align earthworks
- use equipment, tools and machinery
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3604A

Unit Descriptor

Troubleshoot drainage systems

This competency standard covers the process of troubleshooting blockages in drainage lines. It involves planning and preparing for the work, inspecting the site to determine access to drainage lines, and testing the system and cleaning up after locating and clearing any blockages. Troubleshooting blockages in drainage lines requires knowledge of types of drainage systems, components used in drainage systems, isolation processes and procedures, and levelling and alignment processes.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Plan job	1.1 Equipment is selected and checked for safe operation. 1.2 Appropriate personal protective equipment and tools are selected and used according to OHS requirements .
2. Inspect site	2.1 Site is inspected to locate blocked section of drainage lines. 2.2 Work requirements and responsibility for repair is determined and appropriate authorities/persons notified of the intention to commence work.
3. Determine access to drainage lines	3.1 Plan of plumbing system is determined and access points located. 3.2 Digging is carried out without unnecessary damage to buildings, site, environment or existing fixtures/fittings.
4. Carry out job	4.1 Manual lifting and handling techniques are used according to OHS requirements. 4.2 Hand tools and equipment are selected to perform work. 4.3 Mechanical equipment is assembled and used according to manufacturers instructions and OHS requirements. 4.4 Access to drainage lines is obtained to allow blockage to be cleared. 4.5 Blockage is cleared or blocked section is replaced according to enterprise, environmental and OHS procedures.
5. Check job	5.1 Drainage line is tested to confirm blockage is cleared from pipe system. 5.2 Drainage line is repaired/resealed to permit normal use. 5.3 Relevant persons/authorities are advised that repairs have been completed and the drainage line has been commissioned for use.
6. Clean up site, materials and equipment	6.1 Work area is cleaned and aligned, with debris/waste disposed of according to enterprise, environmental and OHS procedures. 6.2 Materials and equipment are maintained according to enterprise, environmental and OHS procedures, and returned to store.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Notifying appropriate authorities/persons of intention to commence work.	2
Collecting analysing and organising information	Inspecting the site and determining work requirements.	2
Planning and organising activities	Preparing for the job and determining access to pipe-work.	2
Working with others and in teams	Performing manual handling and lifting.	2
Using mathematical ideas and techniques	Levelling and aligning the site after blockages are cleared.	2
Solving problems	Determining problem location and solution.	3
Using technology	Clearing blockages using drain-clearing equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What equipment might be relevant to this standard?

Equipment may include mechanically operated drain clearing machines and attachments and manually operated drain clearing tools and attachments.

What OHS requirements might be relevant to this standard?

OHS procedures must be according to State/ Territory legislation and regulations. This may include work site environment and safety, safe use of tools and equipment, use of protective clothing and equipment, and state and local authorities and regulations concerning joining processes and materials handling requirements.

What work requirements might need to be considered and addressed?

These may include site restrictions and procedures, relevant regulations, authorities and permits, incident/accident procedures, standards and certification requirements, and application of safety procedures.

What do drainage lines include? Drainage lines include surface and subsurface drains.

What should be considered before deciding how to clear a blockage? This may include access points, availability of equipment, surrounding structure, type of blockage and possibility of combustion, OHS considerations, and type of material.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in troubleshooting blockages in drainage lines requires evidence that a person can plan and prepare for the work, inspect the site to determine access to lines, locate and clear blockages, test the system and clean up afterwards.

The skills and knowledge required to troubleshoot blockages in drainage lines must be transferable to a different work environment. For example, this could include different types of drains, access difficulties, types of blockages and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types and operational parameters of drains
- components used in drainage systems
- isolation processes and procedures
- levelling and alignment processes
- regulatory requirements, codes of practice and relevant enterprise service standards relating to blockage removal, disconnection and reconnection activities
- application of OHS procedures when locating and clearing line blockages, use of personal protective equipment and materials handling.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- interpret plans, specifications and service manuals
- isolate appliances/fixtures/fittings and related assemblies (where required)
- repair or remove blockages
- use manual and mechanical drain clearing equipment
- level and align site
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3605A**Unit Descriptor****Troubleshoot irrigation systems**

This competency standard covers the process of troubleshooting faults and blockages in irrigation systems. It requires the ability to read and apply system specifications, technical manuals and supply/spare parts inventories, operate, maintain and repair irrigation systems, and record and report maintenance activities. Troubleshooting faults and blockages in irrigation systems requires knowledge of characteristics and operation of replaceable components of irrigation systems, system malfunctions and their likely causes, isolation procedures and OHS and environmental guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Locate and identify faulty components and blockages	1.1 Irrigation system and component function is determined by reference to system specifications and technical manuals. 1.2 Monitoring and maintenance records are checked and reviewed. 1.3 Operational tests are carried out in accordance with system specifications, technical manuals and OHS requirements. 1.4 Faulty components and blockages are identified and documented according to enterprise policy and procedures.
2. Shut down/isolate component	2.1 Shut down sequence and isolation procedures are applied as required according to system specifications and technical manuals. 2.2 Safe shut down or isolation is verified. 2.3 Safety/security lock off devices and signage is installed according to enterprise policy and procedures.
3. Replace faulty components and clear blockages	3.1 Access to faulty components and blockages is arranged. 3.2 Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way. 3.3 Replaceable components are selected from manufacturers catalogues and procured using enterprise procedures. 3.4 Replacement components are installed to meet system specifications according to technical manuals. 3.5 Replace faulty components and clear blockages are carried out without unnecessary damage to surrounding site and structures. 3.6 Blockages are cleared or blocked sections are replaced according to enterprise, environmental and OHS procedures.

4. Return system to normal operating status	4.1 Isolated or shut down components are returned to service. 4.2 Operational tests are carried out according to system specifications, technical manuals and OHS requirements. 4.3 System is returned to normal operational set up. 4.4 Repair activities are reported and recorded according to enterprise policy and procedures

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Order replaceable components from suppliers.	2
Collecting analysing and organising information	Collecting and assessing system performance data.	2
Planning and organising activities	Organising shut down and repair activities.	2
Working with others and in teams	Checking and reviewing monitoring and maintenance records completed by others.	2
Using mathematical ideas and techniques	Interpreting system performance data and purchasing parts within budget.	2
Solving problems	Identifying and replacing faulty components.	2
Using technology	Using computerised irrigation systems.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What irrigation systems might be relevant to this standard?

These may be pressurised irrigation systems such as micro-irrigation, spray irrigation or gravity fed irrigation systems.

Micro-irrigation systems include mains pressure, low pressure, below or above ground, sprays systems, drip emitter trickle, t-tape, mini-sprinklers, capillary, ebb and flow, and flood systems.

Spray irrigation systems include travelling irrigators (soft hose, hard hose boom type) centre pivot, linear move, powered side roll hand shift permanent (installed), and bike shift/easy shift.

Gravity fed irrigation systems include border check, contour irrigation, furrow irrigation, hillside flooding and basin irrigation. Border check systems may be either permanent or temporary earth, plastic or concrete devices for insertion in a drain for reticulating water, contour banks used to collect and distribute water along the perimeter of an irrigation plot, contour banks within a plot to collect/distribute water or larger scale systems to stop water exiting one area to another.

Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.

What faulty components or system parts might need to be replaced?

These may vary according to brand and supplier and may include, but not be limited to, injectors, pumps, tensiometers, probe tubes, flow meter, pressure gauge, controllers, solenoid valves, wiring, quick coupling valves (QCV), computer and/or other scheduling devices, pipes, jets, micro jets, laterals, sprinklers, emitters, integrated dripline "thin wall", seals, outlets and gears.

What operational tests of the system may be conducted?

These may include pressures, flow rates, sprinkler performance, calculation of co-efficient of uniformity and distribution uniformity.

What might be the OHS requirements for maintenance activities?

Requirements may include systems and procedures for safe manual handling, outdoor work (including protection from solar radiation, dust and noise), selection, use and maintenance of relevant personal protective clothing and equipment, selection, care and safe use of hand tools and safe systems for the prevention of electrical injury.

What may be involved in gaining access to faulty components or blockages?

Gaining access may require specific approvals from property owners/managers and may involve excavation work.

How might faulty components be disposed of?

Disposal of faulty components must occur in an environmentally responsible way. For example, metal and plastic components may be recycled, returned to the manufacturer, or disposed of in accordance with enterprise procedures.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in troubleshooting faulty components and blockages in irrigation systems requires evidence that a person can locate, isolate and replace faulty components and blockages and return the system to normal operating status.

The skills and knowledge required to troubleshooting faulty components and blockages in irrigation systems must be transferable to a different work environment. For example, this could include different systems, components, enterprise procedures and access difficulties.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- identification, characteristics and operation of replaceable components of irrigation systems
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- purchasing procedures
- isolation procedures
- enterprise policies and procedures
- irrigation OHS and environmental guidelines.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read and apply system specifications, technical manuals and supply/spare parts inventories
- record and report maintenance activities
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- operate, maintain and repair irrigation systems
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3606A

Unit Descriptor

Measure drainage system performance

This competency standard covers the process of measuring the performance and efficiency of a drainage system. This includes identifying and correcting system problems, measuring, recording and reporting soil moisture, salinity and water table depth to determine system performance and efficiency. It requires the ability to apply measuring and testing techniques, record and report system performance, use computers for recording and reporting drainage system data and implement and follow relevant enterprise OHS and environmental policies and procedures. Measuring drainage system performance requires knowledge of measuring and monitoring procedures for factors contributing to drainage system performance, water table and salinity measures, water quality monitoring methods and techniques, soil moisture measurement procedures and water authority standards and procedures.

Unit Sector No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Assess drainage and collection systems	1.1 A visual inspection is undertaken to determine damaged or broken components and results are recorded in accordance with OHS and enterprise policy and procedures. 1.2 Areas being drained are inspected for signs of water pooling and problems are recorded in accordance with OHS and enterprise policy and procedures. 1.3 Measurements are taken with appropriate equipment to determine drainage performance. 1.4 Drainage/tail water quality is measured in accordance with OHS and enterprise policy and procedures. 1.5 Water table depth is measured where required in accordance with OHS and enterprise policy and procedures. 1.6 Soil salinity is measured where required in accordance with OHS and enterprise policy and procedures. 1.7 Factors external to the system, which may cause interference, are identified and recorded in accordance with OHS and enterprise policy and procedures.
2. Monitor supply of equipment and spare parts	2.1 Supply and part usage are recorded in accordance with enterprise policy and procedures. 2.2 Purchases of spare parts and materials are within budget constraints. 2.3 Parts requirements outside of budget constraints are reported. 2.4 Purchases and orders are recorded in accordance with enterprise procedures and systems.

3. Record and report system performance status
- 3.1 **Water quality** is recorded in accordance with enterprise procedures.
 - 3.2 Water table depth, **soil moisture** and salinity are recorded in accordance with enterprise procedures.
 - 3.3 Strategies that minimise the negative environmental impacts and maximise the positive impacts of the drainage system, are documented.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Reporting drainage system performance status.	2
Collecting analysing and organising information	Collecting and interpreting drainage system performance data.	2
Planning and organising activities	Organising supply of equipment and spare parts.	2
Working with others and in teams	Ensuring supply of spare parts meets demand.	2
Using mathematical ideas and techniques	Manipulating data and calculating variations and compound measures.	2
Solving problems	Identifying deviations in system performance.	2
Using technology	Using measuring instruments and computers for recording data.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What drainage and collection systems may be relevant to this standard?

Drainage systems may include surface drains, culverts, mole drains, sand slit, sub-surface traps, pit and trap systems, dune and swale systems, reed beds, water-recycling pumps and baffles.

What might an inspection of drainage reveal?

Inspection may reveal surface pooling, waterlogging (soil moisture), water table depth, testing of surface and subsurface infiltration rates, and symptoms associated with excessive leachates and nutrients.

What OHS requirements might be relevant to this standard?	OHS requirements may include safe systems and procedures for outdoor work, including protection from solar radiation, dust and noise, protection against chemical residues, including that in/on foliage, water, soil and other items, and the selection, use and maintenance of relevant personal protective clothing and equipment.
What measuring equipment might be used?	This may include tensiometers, probe tubes, flow meter, catch cans and pressure gauge, test wells and fault meter.
What factors external to the system may cause interference?	These may include pests and vermin (tortoises, yabbies, ants, spiders, snails, rabbits, hares, foxes, wasps, rose weevil, earwigs, snakes, carp, pigs, wallabies, eels, rats, mice, kangaroos, dogs, cats, parrots), organic (leaves, slime, weeds, algae, sticks, crop residue), weather, channel regulators (if applicable), fire, mechanical damage (if applicable), power spikes, power failures, storm run off/system breakage, thatch, runoff from adjacent areas and rising water tables.
What drainage system parts may be relevant to this standard?	These will vary according to brand and supplier and may include injectors, pumps, and tensiometers, probe tubes, flow meter, computer and/or other scheduling devices, recycling equipment and spray equipment.
What water quality measures might be relevant to this standard?	These include salinity and electro conductivity, pH, sodicity, chloride, calcium carbonate, iron, turbidity, nutrients and pesticides.
What soil moisture measuring devices may be used?	These may include subjective measurement, gypsum blocks, tensiometers, enviroscan, neutron probe TDR (time domain reflectometer).

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in measuring drainage system performance requires evidence that a person can identify and correct system problems, measure, record and report soil moisture, salinity and water table depth to determine system performance and efficiency.

The skills and knowledge required to measure drainage system performance must be transferable to a different work environment. For example, this could include different drainage systems and components, crops/planted areas and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- OHS guidelines
- measuring and monitoring procedures for factors contributing to drainage system performance
- positive and negative environmental impacts of drainage systems
- water table and salinity measures
- water quality monitoring methods and techniques
- soil moisture measurement procedures
- water authority standards and procedures
- enterprise policies and procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- apply measuring and testing techniques
- record and report system performance
- identify adverse environmental impacts of drainage systems and appropriate remedial action
- use computers for recording and reporting drainage system data
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3607A**Measure irrigation delivery system performance****Unit Descriptor**

This competency standard covers the process of measuring pressures, flows and distribution uniformity of an irrigation system. It requires the ability to record and report system performance, calculate pressure differentials, flow rates, plant/crop yields, estimated water usage/actual water usage and apply measuring and testing techniques. Measuring irrigation delivery system performance requires knowledge of soil water retention testing techniques, measuring and monitoring procedures for factors contributing to irrigation system delivery, and water authority standards and procedures.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Measure irrigation system performance	1.1 System pressures are measured and recorded in accordance with OHS and enterprise policy and procedures . 1.2 Variations in pressures are identified and recorded in accordance with enterprise policy and procedures. 1.3 Water flow rates are measured and recorded in accordance with enterprise policy and procedures. 1.4 Variations in water flow and distribution are identified and recorded in accordance with enterprise policy and procedures. 1.5 Pump performance parameters are measured as necessary and recorded in accordance with enterprise policy and procedures. 1.6 Variations in pump performance parameters are measured where relevant and recorded in accordance with enterprise policy and procedures. 1.7 Distribution and delivery systems are inspected and malfunctions in system are identified, fixed and actions recorded in accordance with enterprise policy and procedures. 1.8 Factors external to the system that may cause interference are identified and recorded in accordance with enterprise policy and procedures.
2. Monitor supply of equipment and spare parts	2.1 Supply and part usage are recorded in accordance with enterprise policy and procedures. 2.2 Spare parts meet demand. 2.3 Purchases are within budget constraints. 2.4 Parts requirements outside of budget constraints are reported. 2.5 Purchases and orders are recorded in accordance with enterprise procedures and systems.

3. Record and report system performance status
- 3.1 System pressures and **variations** are recorded in accordance with enterprise policy and procedures.
 - 3.2 System flow rates and variations are recorded in accordance with enterprise policy and procedures.
 - 3.3 Distribution uniformity and mean application rates are **calculated** and recorded in accordance with enterprise policy and procedures.
 - 3.4 Watering depth is determined and recorded in accordance with enterprise policy and procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Reporting system performance status.	2
Collecting analysing and organising information	Collecting and recording irrigation system performance data.	2
Planning and organising activities	Organising supply of equipment and spare parts.	2
Working with others and in teams	Ensuring supply of spare parts meets demand.	2
Using mathematical ideas and techniques	Manipulating data and calculating variations and compound measures.	2
Solving problems	Identifying deviations in system performance.	2
Using technology	Using measuring instruments and computers for recording data.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

- What measurements might be recorded?
- These may include pressures, flow rates, distribution uniformity, depth of irrigation and soil moisture at root zone.
- Water quality measures include salinity and electro conductivity, pH, sodicity, chloride, calcium carbonate, iron, turbidity, nutrients and pesticides.

What measuring equipment might be used?

This may include tensiometers, neutron tubes, flow meter, catch cans, pressure gauge.

Soil moisture measuring devices may include subjective measurement, gypsum blocks, tensiometers, enviroscan, neutron probe and TDR (time domain reflectometer).

What irrigation systems might be relevant to this standard?

These may be pressurised irrigation systems such as micro-irrigation, spray irrigation or gravity fed irrigation systems.

Micro-irrigation systems include mains pressure, low pressure, below or above ground, sprays systems, drip emitter trickle, t-tape, mini-sprinklers, capillary, ebb and flow and flood systems.

Spray irrigation systems include travelling irrigators (soft hose, hard hose boom type) centre pivot, linear move, powered side roll hand shift permanent (installed), and bike shift/easy shift.

Gravity fed irrigation systems include border check, contour irrigation, furrow irrigation, hillside flooding, basin irrigation. Border check systems may be either permanent or temporary earth, plastic or concrete devices for insertion in a drain for reticulating water, contour banks used to collect and distribute water along the perimeter of an irrigation plot, contour banks within a plot to collect/distribute water or larger scale systems to stop water exiting one area to another.

Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.

What OHS requirements might be relevant to this standard?

OHS requirements may include safe systems and procedures for outdoor work, including protection from solar radiation, dust and noise, protection against chemical residues, including that in/on foliage, water, soil and other items and the selection, use and maintenance of relevant personal protective clothing and equipment.

What procedures might be specified by the enterprise?

Some examples may be procedures for recording pressure variations, recording distribution uniformity, recording flow variations, recording leaks, recording outside interference, recording system efficiencies, water table level, soil salinity and recording pump run hours.

What factors external to the system may cause interference?

These may include pests and vermin (tortoises, yabbies, ants, spiders, snails, rabbits, hares, foxes, wasps, rose weevil, earwigs, snakes, carp, pigs, wallabies, eels, rats, mice, kangaroos, dogs, cats, parrots), organic (leaves, slime, weeds, algae, sticks, crop residue), weather, channel regulators (if applicable), fire, mechanical damage (if applicable), power spikes, power failures, storm run off and system breakage.

What irrigation system parts may be relevant to this standard?	These will vary according to brand and supplier and may include injectors, pumps, and tensiometers, probe tubes, flow meter, computer and/or other scheduling devices, recycling equipment and spray equipment.
How might information be recorded?	This may be recorded manually in a logbook or using graphs and charts on paper and/or electronically on computer.
What factors contribute to system performance?	These may include drainage, soil moisture, water table levels, soil salinity, rainfall, air temperature, frost risk, water quality, plant/crop and soil nutrient deficiencies and irrigation system maintenance requirements.
What variations may occur?	This may include pressure variation between emitters at different distances from supply, within a valve (plus or minus 10%), and discharge variation within a valve (plus or minus 5%).
What values might be calculated?	In addition to mean application rate (MAR) and distribution uniformity (DU), these include pressure variations, and flow variations.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in measuring irrigation delivery system performance requires evidence that a person can measure pressures, flows and distribution uniformity of an irrigation system.

The skills and knowledge required to measure irrigation delivery system performance must be transferable to a different work environment. For example, this could include different irrigation systems, measuring equipment, plant/crop types and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- OHS guidelines
- soil water retention testing techniques
- measuring and monitoring procedures for factors contributing to irrigation system delivery
- water authority standards and procedures
- environmental impacts of irrigation, using water from any ground or underground source
- enterprise policies and procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- access and prepare data records for both print-based and computer-based data
- use computers for recording and reporting data
- record and report system performance
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- calculate pressure differentials, flow rates, crop yields, estimated water usage/actual water usage
- apply measuring and testing techniques
- implement and follow relevant enterprise OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3608A**Monitor and operate water treatment processes****Unit Descriptor**

This competency standard covers the process of monitoring, operating, measuring, adjusting and reporting under limited supervision, water (including waste water) treatment performance and process control. It requires the ability to identify control system faults, use water sampling and testing techniques, prepare and apply chemical dosing, and record data. Monitoring and operating water treatment processes requires knowledge of water treatment and water filtration techniques, water quality monitoring methods and techniques, chemical dosing processes, and OHS procedures relating to the operation of machinery and the use of chemicals.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Monitor water treatment plant performance	1.1 Routine inspections of treatment equipment are carried out in accordance with manufacturers recommendations, OHS and enterprise policy and procedures. 1.2 Water samples are collected and standard tests are conducted, or samples are sent for analysis in accordance with enterprise policy and procedures and where applicable, the biosecurity and food safety codes. 1.3 Data on treatment process is collected, recorded and reported in accordance with enterprise policy and procedures.
2. Control chemical use	2.1 Chemicals are used/handled/stored in accordance with enterprise policy and procedures and statutory requirements . 2.2 Chemical dosing is prepared in accordance with enterprise policy and procedures and statutory requirements. 2.3 Information related to chemical supply and usage is maintained in accordance with enterprise policy and procedures and statutory requirements.
3. Operate and control water treatment processes	3.1 Water and/or waste water treatment processes are monitored to maintain parameters of operation. 3.2 Process faults and operational conditions of treatment equipment are identified and reported in accordance with enterprise policy and procedures. 3.3 Basic equipment and process adjustments are initiated to enhance performance in accordance with enterprise policy and procedures.
4. Compile records	4.1 Reports are compiled from equipment and water treatment processes to meet enterprise policy and procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Recording and reporting information.	2
Collecting analysing and organising information	Collecting and interpreting water quality data.	2
Planning and organising activities	Operating and monitoring water treatment equipment.	2
Working with others and in teams	Reporting process faults and operational conditions of treatment equipment to others.	2
Using mathematical ideas and techniques	Interpreting measurements in water quality data and measuring chemical dosages.	2
Solving problems	Identifying faults in water treatment equipment and processes.	2
Using technology	Using water treatment and monitoring equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What water treatment equipment may be relevant to this standard?

Equipment may include electronic monitoring and metering systems, manual chart recording, basic hand tools, basic testing and sampling equipment, and reuse and recycling equipment.

What OHS requirements may be relevant to this standard?

These may include systems and procedures for the safe operation and maintenance of machinery and equipment, safe systems and procedures for handling, transporting, using and storing chemicals (taking into account toxicity levels and environmental effects), and the selection, use and maintenance of relevant personal protective clothing and equipment.

What water quality measures might be used when standard tests are conducted?	Measures include salinity and electro conductivity, pH, sodicity, chloride, calcium carbonate, iron, turbidity, BOD (biological oxygen demand), biota, nutrients, pathogens, and pesticides.
What enterprise policy and procedures and statutory requirements might relate to controlling chemical use?	These may include the use of suitable personal protective equipment, waste disposal/recycling and re-use guidelines, contamination controls, safe storage and labelling processes, OHS legislation, local government by laws, and Australian standards for handling and using toxic or hazardous materials.
What water treatment processes are operated and controlled?	Water treatment processes may include pre-treatment, chemical addition, solids separation and disinfection. Pre-treatment may include screens, lime and chlorination. Chemical addition may include coagulation, flocculation and flash mixing. Solids separation may include sedimentation, flotation, filtration and membrane processes. Disinfection may include chlorination, ozonation, chloramination and ultra violet treatment.
What waste water treatment processes are operated and controlled?	Waste water treatment processes may include pre-treatment, primary treatment, secondary treatment, chemical precipitation, solids handling, disinfection and advanced treatment. Pre-treatment may include screens, grit removal, shredding, and odour removal. Primary treatment may include primary sedimentation. Secondary treatment may include tricking filters, rotating biological contactors, activated sludge and lagoon systems. Solids handling may include aerobic or anaerobic digesters and sludge disposal. Disinfection may include maturation ponds, chlorination, ultraviolet irradiation, and ozonation. Advanced treatment may include chemical nitrogen removal, biological nitrogen removal, biological phosphorus removal, chemical phosphorous removal, and micro filtration.
What adjustments may be made to the system?	Adjustments may include dosing adjustments and pH correction.
What records may be compiled?	Records may include equipment performance data, sampling results, and chemical usage, which may be recorded on computer or manually in a log book.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in monitoring and operating water treatment processes requires evidence that a person can carry out routine inspections and tests on water samples, control chemical use in a safe and environmentally responsible manner, operate and control water treatment processes, and compile records and reports.

The skills and knowledge required to monitor and operate water treatment processes must be transferable to a different work environment. For example, this could include different treatment processes, equipment and machinery, and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- water treatment and water filtration techniques
- water quality monitoring methods and techniques
- environmental impacts of irrigation, using water from any ground or underground source
- hazardous materials handling
- chemical dosing processes
- enterprise policies and procedures
- biosecurity and food safety codes of practice
- OHS procedures relating to the operation of machinery and the use of chemicals.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- identify control system faults
- identify adverse environmental impacts of irrigation activities and appropriate remedial action, and use water sampling and testing techniques
- read and apply information on chemical labels
- prepare and apply chemical dosing
- implement and follow relevant enterprise OHS and environmental policies and procedures
- record data.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3609A**Unit Descriptor****Operate fertigation equipment**

This competency standard covers the process of operating fertigation equipment to deliver fertilisers via the irrigation system. It requires the ability to includes calculating and preparing fertigation materials, connecting, calibrating and operating the equipment, and monitoring and adjusting the delivery of fertilisers. Shut down, cleaning of equipment and disposal of waste are also included. Operating fertigation equipment requires knowledge of injection equipment, chemical handling procedures, cleaning procedures, environmental impacts of delivering fertilisers via the irrigation system, and OHS issues.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare materials and equipment for operation	1.1 Materials and services are confirmed as available and ready for operation. 1.2 Materials are prepared to meet fertigation requirements. 1.3 Injection or fertigation equipment is connected, as directed, and calibrated according to manufacturers specifications. 1.4 Fertiliser concentration is calculated and the solution thoroughly mixed according to enterprise, OHS and environmental requirements. 1.5 Equipment is set to meet fertigation requirements.
2. Operate the fertigation process	2.1 Start up sequence is implemented according to operations manual and enterprise procedures. 2.2 Fertigation process is operated and monitored to ensure delivery is maintained according to enterprise specifications and procedures. 2.3 Fertigation equipment is monitored to ensure no adverse environmental impact is caused by faulty operation. 2.4 Corrections to the process and equipment adjustments are implemented as necessary.
3. Shut down fertigation equipment	3.1 Injection equipment is flushed out according to enterprise standards prior to shut down. 3.2 Equipment is cleaned according to enterprise procedures. 3.3 Waste generated by both the fertigation process and cleaning procedures is managed according to environmental protection requirements and enterprise OHS procedures. 3.4 Fertigation activities are reported and recorded according to regulatory requirements and enterprise procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Confirming materials and services are available and ready for operation.	2
Collecting analysing and organising information	Interpreting directions for connection of injection equipment.	2
Planning and organising activities	Preparing fertigation materials and equipment for operation.	2
Working with others and in teams	Reporting and recording fertigation activities.	2
Using mathematical ideas and techniques	Calculating material concentration and calibrating equipment.	2
Solving problems	Making corrections to the process and adjustments to equipment as necessary.	2
Using technology	Using fertigation equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What materials may be injected using fertigation equipment?

Materials may be wet or dry, and may include fertilisers, chlorine, acid and cleaning agents.

What injection or fertigation equipment may be relevant to this standard?

This may include injection pump, injection point and chemical holding tank.

The irrigation system may range from manual operation and monitoring to fully automated with computer control and monitoring.

What OHS procedures may be relevant to this standard?

These may include hazards identification and risk assessment, systems and procedures for the safe operation and maintenance of machinery and equipment, selection, use and maintenance of relevant personal protective clothing and equipment, and safe systems and procedures for handling, transporting and storing chemicals and hazardous substances taking into account toxicity levels and environmental effects.

How might process operation and monitoring functions be carried out?

Operation and monitoring may be manual or involve the use of a process control system.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in operating fertigation equipment requires evidence that a person can calculate and prepare fertigation materials, connect and calibrate equipment, operate, monitor and adjust delivery, shut down and clean equipment, and dispose of waste in an environmentally responsible way.

The skills and knowledge required to operate fertigation equipment must be transferable to a different work environment. For example, this could include different fertilisers, fertigation equipment, plant/crop types and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- fertigation injection equipment
- chemical handling procedures for fertiliser, chlorine, acid and cleaning agents
- cleaning procedures for fertigation equipment
- material safety data sheets (MSDS)
- environmental impacts of delivering fertilisers via the irrigation system
- OHS issues
- enterprise policies and procedures.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- calculate and prepare fertigation materials
- connect, calibrate and operate the equipment, and monitor and adjust the delivery of fertilisers
- shut down, clean equipment and dispose of waste
- use personal protective equipment
- identify adverse environmental impacts of fertigation activities and appropriate remedial action
- implement enterprise, OHS and environmental policies and procedures.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3610A

Unit Descriptor

Operate gravity fed irrigation systems

This competency standard covers the process of operating gravity fed (flood) irrigation systems including the use of pre-start checks, start-up, operation and inspection of the system, and shut down in response to irrigation indicators. It requires the ability to read and follow operations manual and irrigation schedules, check pressure at the headworks and control valves, and carry out running repairs on irrigation delivery and drainage systems. Operating gravity fed (flood) irrigation systems requires knowledge of main components of gravity fed irrigation systems, pump types and their operation, environmental impacts of irrigation, inspection procedures, soil/plant/water relationships, water requirements of plants/crops, shutdown sequences, and OHS, environmental and enterprise policies and procedures.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Perform pre-start checks for gravity fed irrigation system	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational. 1.2 Pumps are primed, if necessary, and gates and controls are open or closed in accordance with enterprise procedures. 1.3 Pipes, system equipment and outlets are positioned and set up in accordance with enterprise standards and OHS requirements .
2. Start up and inspect system	2.1 Syphons and other delivery mechanisms are primed and started in accordance with enterprise procedures. 2.2 Start up sequence is implemented in accordance with operations manual and water levels, and pressure built up slowly as directed. 2.3 Pressure at the headworks and control valves is within design specifications indicating efficient filter operation, and water is distributed evenly to the targeted areas with minimal wastage and run-off. 2.4 All malfunctions, leaks, damage to water courses and blockages are corrected or repaired immediately and reported in accordance with OHS and enterprise procedures. 2.5 Head water levels are monitored and maintained. 2.6 If used, pumps are monitored during operation, rubbish is cleared from outlets, and pump is backflushed in accordance with enterprise procedures. 2.7 Irrigation changes are implemented in accordance with enterprise procedures. 2.8 Water reuse systems are checked for clearance and freedom from weeds .

3. Shut down system based upon irrigation indicators
 - 3.1 Area is irrigated in accordance with enterprise procedures, and time lag between shut down and end of watering is observed to minimise run-off and deep percolation.
 - 3.2 System components are shut down in sequence in accordance with manufacturers and enterprise procedures.
 - 3.3 Drainage and treatment systems are checked in accordance with enterprise procedures.
 - 3.4 Tailwater control systems are implemented in accordance with statutory requirements and enterprise standards.
 - 3.5 Irrigation activities are reported and recorded in accordance with regulatory requirements and enterprise procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Reporting irrigation activities.	1
Collecting analysing and organising information	Checking pressure and flow rates, and recording irrigation activities.	2
Planning and organising activities	Performing shut down sequence.	2
Working with others and in teams	Reporting malfunctions, leaks, damage to water courses and blockages.	2
Using mathematical ideas and techniques	Measuring and interpreting pressure and flow rates.	2
Solving problems	Identifying and correcting malfunctions, leaks and blockages.	2
Using technology	Using computerised equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What gravity fed irrigation systems may be relevant to this standard?	Flood irrigation systems may include border check, contour irrigation, furrow irrigation, hillside flooding, and basin irrigation. Border check systems may be either permanent or temporary earth, plastic or concrete devices for insertion in a drain for reticulating water, contour banks used to collect and distribute water along the perimeter of an irrigation plot, contour banks within a plot to collect/distribute water, or larger scale systems to stop water exiting one area to another. Gravity fed systems may range from manual operation and monitoring to fully automated with computer control and monitoring.
What outlets may be used in the system?	Outlets may include siphons, cups and fluming, pipes and gates/slides/doors.
What OHS requirements are relevant to this standard?	These may include systems and procedures for the safe operation of irrigation equipment, and to ensure protection against injury when working with pumps, outlets and other system equipment, the prevention of electrical type injury, manual handling and procedures for working outdoors, including protection from solar radiation, dust and noise.
What may need to be inspected?	This may include water flow, water quality at delivery points, watercourses for leaks and blocks, and drainage flow.
What does the even distribution of water depend on?	Even distribution of water depends on channel levels (if applicable), time, number and position of siphons running (if applicable), time, number and position of outlets running, water pressure, no leaks/blocks in system, wind (weather conditions), flow rates and times.
What reuse systems may be relevant to this standard?	These may include disinfestation and filtering equipment.
How may weeds be controlled?	Weeds may be controlled by mechanical methods or chemical methods (refer to regulatory bodies).
What irrigation indicators might be relevant to this standard?	These may include soil moisture, weather reports and information, and plant/crop condition.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in operating gravity fed irrigation systems requires evidence that a person can perform pre-start checks, start, operate and inspect the system, and shut down in response to irrigation indicators.

The skills and knowledge required to operate gravity fed irrigation systems must be transferable to a different work environment. For example, this could include different crops, flood irrigation systems, environmental parameters and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- general irrigation methods for gravity fed irrigation systems
- main components of gravity fed irrigation systems
- pump types used in gravity fed irrigation systems and their operation
- environmental impacts of irrigation, using water from any ground or underground source
- inspection procedures
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- shutdown sequence
- OHS, environmental and enterprise policies and procedures relating to the operation of gravity fed irrigation systems.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read and follow operations manual and irrigation schedules
- check pressure at the headworks and control valves
- carry out running repairs on irrigation delivery and drainage systems
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant OHS and environmental policies and procedures relating to the operation of gravity fed irrigation systems.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3611A

Unit Descriptor

Operate pressurised irrigation systems

This competency standard covers the process of operating pressurised irrigation systems including the use of pre-start checks, start-up, operation and inspection of the system, and shut down in response to irrigation indicators. It requires the ability to read and follow operations manual and irrigation schedules, measure and interpret flow rates and pressures, identify adverse environmental impacts of irrigation activities and take appropriate remedial action, and implement and follow relevant OHS and environmental policies and procedures. Operating pressurised irrigation systems requires knowledge of main components of pressurised irrigation systems, pump types and their operation, environmental impacts of irrigation, soil/plant/water relationships, and water requirements of plants/crops.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Perform pre-start checks for pressurised irrigation system	1.1 Checks of water, power, fuel and lubricants ensure that all are available and the control system is operational. 1.2 Pumps are primed, if necessary, and valves and controls are open or closed as directed. 1.3 Pressure and flow testing equipment are calibrated and available as required. 1.4 Other pre-start system checks are carried out in accordance with manufacturers, OHS and enterprise procedures.
2. Start up and inspect system	2.1 Start up sequence is implemented in accordance with operations manual. 2.2 All malfunctions, leaks and blockages are corrected or repaired immediately and reported in accordance with OHS and enterprise procedures. 2.3 Pressure at the headworks and control valves is within design specifications indicating efficient filter operation, and water is distributed evenly to the targeted areas with minimal wastage and run-off.
3. Shut down system based upon irrigation indicators	3.1 Water is applied for sufficient time to allow amount of water necessary to achieve required soil moisture levels in accordance with irrigation schedule, environmental considerations and allowing for weather conditions. 3.2 System components are shut down and drained in sequence in accordance with manufacturers, OHS and enterprise procedures. 3.3 Drainage and treatment systems are checked in accordance with enterprise procedures. 3.4 Irrigation activities are recorded and in reported accordance with regulatory requirements and enterprise procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Reporting irrigation activities.	2
Collecting analysing and organising information	Reading and interpreting flow rates and recording irrigation activities.	2
Planning and organising activities	Performing shut down sequence.	2
Working with others and in teams	Reporting malfunctions.	2
Using mathematical ideas and techniques	Measuring and interpreting pressure and flow rates.	2
Solving problems	Identifying and correcting malfunctions, leaks and blockages.	2
Using technology	Using computerised equipment.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What pressurised irrigation systems might be relevant to this standard?

Pressurised irrigation systems may include micro-irrigation systems and spray irrigation systems.

Micro-irrigation systems may be mains pressure, low pressure, below or above ground, sprays systems, drip emitter trickle, t-tape, mini-sprinklers, and capillary.

Spray irrigation systems may be travelling irrigators (soft hose, hard hose boom type), centre pivot, linear move, powered side roll hand shift permanent (installed), and bike shift/easy shift.

Irrigation systems may range from manual operation and monitoring to fully automated with computer control and monitoring.

What OHS requirements are relevant to this standard?	These may include systems and procedures for the safe operation of irrigation equipment and to ensure protection against injury when working with pressurised equipment, the prevention of electrical type injury, manual handling and procedures for working outdoors, including protection from solar radiation, dust and noise.
What may need to be inspected?	This may include water flow, water quality and pressures at delivery points, lines for leaks and blocks, and drainage flow.
What irrigation indicators might be relevant to this standard?	These may include soil moisture and plant/crop condition.
What environmental considerations relate to this standard?	Environmental considerations may include efficient operation of the system to conserve water by identifying and repairing leaks, avoidance of over watering, and even distribution of water to targeted areas with minimal wastage and run-off.
What might system components include?	These may vary according to brand and supplier and may include pumps, tensiometers, probe tubes, flow meter, catch cans, pressure gauge, computer and/or other scheduling devices, recycling equipment and spray equipment.
What irrigation activities may be recorded?	These may include water used, time of shutdown, malfunctions, blockages, leaks and other faults requiring repair.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in operating pressurised irrigation systems requires evidence that a person can perform pre-start checks, start, operate and inspect the system, and shut down in response to irrigation indicators.

The skills and knowledge required to operate pressurised irrigation systems must be transferable to a different work environment. For example, this could include different crops, pressurised irrigation systems, environmental parameters and enterprise procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- general irrigation methods for pressurised systems
- main components of pressurised irrigation systems
- pump types used in pressurised irrigation systems and their operation
- environmental impacts of irrigation using water from any ground or underground source
- soil/plant/water relationships
- water requirements of plants/crops consistent with sound environmental management
- shutdown sequence
- OHS, environmental and enterprise policies and procedures relating to the operation of pressurised irrigation systems.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- read and follow operations manual and irrigation schedules
- measure and interpret flow rates and pressures
- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- implement and follow relevant OHS and environmental policies and procedures relating to the operation of pressurised irrigation systems.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3612A**Implement a maintenance program for an irrigation system****Unit Descriptor**

This competency standard covers the process of implementing a maintenance program for an irrigation system. It requires the ability to interpret an irrigation maintenance program, inspect irrigation system, record and report maintenance activities, test irrigation equipment, record results, undertake minor repairs of equipment, and dispose of unused or waste materials from site in an environmental safe sensitive manner. Implementing a maintenance program for an irrigation system requires knowledge of soil/plant/water relationships, environmental impacts of irrigation, irrigation system components, common operational and maintenance problems, and environmentally safe disposal procedures.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Interpret an irrigation maintenance program	1.1 Scope of maintenance works is determined according to the irrigation maintenance program. 1.2 Frequency of maintenance works is determined and implemented according to the irrigation maintenance program. 1.3 Irrigation maintenance standards are established in line with the irrigation maintenance program. 1.4 Maintenance works are planned and prepared. 1.5 OHS requirements are identified, associated hazards and risks assessed, and suitable controls implemented. 1.6 Environmental considerations of irrigation maintenance activities are identified.
2. Inspect irrigation system	2.1 An inspection checklist is established according to the irrigation maintenance program. 2.2 System is regularly inspected according to the checklist. 2.3 Remedial action and repairs are identified and undertaken to restore system to full effectiveness. 2.4 Servicing of mechanical equipment is undertaken according to the irrigation maintenance program. 2.5 Results of maintenance works are assessed and recorded to ensure repairs or maintenance standards have been achieved according to the irrigation maintenance program. 2.6 Ensure surroundings are tidied and materials and equipment cleared from the site on completion of maintenance works.

3. Record and report maintenance activities
 - 3.1 Damage and blockage caused by pests and animals are recorded by damage type, location and the section of the system affected.
 - 3.2 Damage or faulty pumps, valves, electrical components and computer systems are recorded and reported, and action taken to effect repairs.
 - 3.3 Routine and preventative maintenance activities are recorded and reported in accordance with enterprise standards.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through reporting of maintenance activities.	2
Collecting analysing and organising information	Information may need to be collected, analysed and organised when testing systems and recording results.	2
Planning and organising activities	Activities may need to be planned and organised according to enterprise guidelines.	2
Working with others and in teams	Team work may need to be applied when testing and adjusting environmental parameters.	2
Using mathematical ideas and techniques	Mathematical ideas and techniques may need to be applied when testing irrigation equipment.	2
Solving problems	Problem-solving skills may need to be applied in troubleshooting problems with the system.	2
Using technology	The use of technology may be applied when using tools to check or repair the system.	2

RANGE STATEMENT

The Range of Variables explains the range of contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment may depend on the work context.

What is likely to be included in the scope of maintenance works?

Irrigation maintenance work on pressurised systems may range from manual operation and monitoring to fully automated with computer control and monitoring. They may include micro-irrigation systems and spray irrigation systems.

Micro-irrigation systems may be mains pressure, low pressure, below or above -ground, sprays systems, drip emitter trickle, t-tape, mini-sprinklers, and capillary. Spray irrigation systems may be travelling irrigators (soft hose, hard hose boom type), centre pivot, linear move, powered side roll hand shift permanent (installed), and bike shift/easy shift.

Irrigation maintenance work on gravity-fed systems may range from manual operation and monitoring to fully automated with computer control and monitoring. Flood irrigation systems may include border check, contour irrigation, furrow irrigation, hillside flooding, and basin irrigation. Border check systems may be either permanent or temporary earth, plastic or concrete devices for insertion in a drain for reticulating water, contour banks used to collect and distribute water along the perimeter of an irrigation plot, contour banks within a plot to collect/distribute water, or larger scale systems to stop water exiting one area to another.

What OHS requirements are relevant to this standard?

These may include systems and procedures for the safe operation of irrigation equipment and to ensure protection against injury when working with pumps, outlets and other system equipment, the prevention of electrical type injury, manual handling and procedures for working outdoors, including protection from solar radiation, dust and noise.

What environmental considerations relate to this standard?

Environmental considerations may include efficient operation of the system to conserve water by identifying and repairing leaks, avoidance of over watering, and even distribution of water to targeted areas with minimal wastage and run-off.

What might servicing of mechanical equipment include?

Periodical maintenance for pumping unit may include changing engine oil, replacing the oil filter, replacing the air cleaner, checking battery water level, pre-cleaner, gear box oil, cooling system/water, fuel, battery charge and fuel tank, greasing the pump jack shaft and bearings, and flushing (de-silting) the pump.

Centre control tower maintenance may include greasing head of pivot and all gearboxes, checking tyre pressure, and cleaning electrical controls of authorised components.

There may be environmental considerations relating to the servicing of mechanical equipment such as disposal of oils/grease and used parts.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in implementing a maintenance program for an irrigation system requires evidence that a person can interpret the maintenance program and implement it to industry and enterprise standards.

The skills and knowledge required to implement a maintenance program for an irrigation system must be transferable to a different work environment. For example, this could include different irrigation systems, enterprises, locations, soil types and environmental considerations.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- soil/plant/water relationships
- environmental impacts of irrigation
- irrigation system components
- common operational and maintenance problems
- enterprise, OHS and environmental policies and procedures
- environmentally safe disposal procedures for chemical containers and residues, oils/grease and used parts.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, as per template complementary skills are required. These include the ability to:

- interpret an irrigation maintenance program
- inspect irrigation system
- record and report maintenance activities
- read and interpret design and layout plans
- test irrigation equipment
- record all test results clearly and concisely with attention to detail
- undertake minor repairs of equipment
- dispose of unused or waste materials from site in an environmentally safe and sensitive manner.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3708A

Clean and fumigate intensive production sheds

Unit Descriptor

This competency standard covers the process of cleaning and fumigating sheds used for the intensive production of livestock. It is necessary to provide a hygienic and disease free environment for each new batch of livestock. The adherence to strict hygiene standards underpins the competency in many areas of the industry.

When the requirements of this standard are met, minimum contamination remains from previous flock/herd, all surfaces inside and outside the shed are treated so that they are visually clean, and sanitisers are applied to cleaned surfaces.

This standard is applicable to the production of poultry in an intensive production system.

The cleaning and fumigation of intensive production sheds is likely to be under limited supervision from others, with checking only related to overall progress. It is usually done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services and actions, and the achievement of outcomes within time constraints.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to clean shed	1.1 Requirements for the work to be undertaken are interpreted and confirmed with supervisor. 1.2 OHS hazards are identified, risks assessed and suitable controls are implemented. 1.3 Suitable personal protective equipment is selected, used and maintained. 1.4 The environmental implications of cleaning the shed are identified, likely outcomes assessed and, if necessary, responsible action is taken. 1.5 Equipment is raised, dismantled or removed from the shed without damage for cleaning. 1.6 Feed and watering equipment is raised or removed from shed, cleaned and sanitised to remove contamination. 1.7 Electrical switchboards and other equipment are covered or sealed to prevent entry of water.

2. Clean shed and surrounds
 - 2.1 OHS hazards are identified, risks assessed and suitable controls are implemented.
 - 2.2 Machinery is available, serviced and prepared for operation according to established operating practice, and operated inside and outside the shed.
 - 2.3 Litter is removed and disposed of according to establishment **hygiene** practice and using the available on-farm resources, and the floors are thoroughly swept.
 - 2.4 Filters are serviced and drinker lines and tanks are **flushed**.
 - 2.5 **Silos** are emptied and cleaned, as required by hygiene and production programs.
 - 2.6 Chemicals, detergents and disinfectants are mixed according to instructions.
 - 2.7 Chemical agents are safely handled and applied in compliance with **OHS** standards and in line with property quality assurance program.
 - 2.8 Electrical equipment is dry-cleaned.
 - 2.9 Run-off from cleaning activity is managed according to the organisations effluent and waste management procedures.
 - 2.10 Checks are made to ensure that all cleaning and **hygiene processes** are completed to standard.
3. Fumigate shed
 - 3.1 **Need for fumigation** is determined from supervisors instructions, production/hygiene management plan, or management practice.
 - 3.2 **OHS** hazards are identified, risks assessed and suitable controls are implemented.
 - 3.3 **Fumigant** and apparatus are prepared according to manufacturers instructions and in line with established safe working procedures.
 - 3.4 Shed is sealed and **fumigated** to ensure maximum exposure of the fumigant to disease-causing organisms.
 - 3.5 Shed is aired to ensure evacuation of toxicants prior to re-entry of staff and re-installation of equipment.
4. Complete hygiene and administration tasks
 - 4.1 **Equipment** is cleaned in accordance with manufacturers specifications, organisational procedures and regulations.
 - 4.2 Attachments and other ancillary equipment are cleaned and stored to minimise damage and to maximise hygiene according to manufacturers specifications, organisational procedures and regulations.
 - 4.3 Insecticides are applied, as required by the organisation and the harvest strategy.
 - 4.4 All containers, leftover fluids, waste and debris from the fumigation operations are disposed of safely and appropriately.
 - 4.5 All required **records and documentation** are completed accurately and promptly in accordance with organisational requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	To ascertain the specific requirements of the operation and the need for fumigation.	1
Collecting analysing and organising information	While gathering data to complete records such as MSDS sheets.	1
Planning and organising activities	In undertaking the preparation activities for both cleaning and fumigation.	1
Working with others and in teams	In ensuring safe work practice and to minimise risk.	2
Using mathematical ideas and techniques	In measuring and mixing the required volumes and quantities of detergents and other chemicals.	2
Solving problems	In ensuring that any hazards that present are dealt with effectively and promptly.	2
Using technology	By operating the range of equipment used in cleaning and washing the shed.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What actions could be taken to eliminate or minimise OHS risk?

The range of actions are both systemic and at an operational level. These are listed below.

Systems should be in place to ensure the safe operation and maintenance of machinery and equipment, especially high pressure cleaners. Precautions should also be in place to minimise exposure to noise, gases and organic dusts.

Fixtures should be in place in all storage sheds, including appropriate access ladders, hand rails and ladder cages.

Personal protective equipment should be selected, used and maintained, including precaution for hot water protection.

Environmental conditions should be controlled. For example, keeping moisture levels as low as possible will reduce the likelihood of fire. Safe access to above floor level areas.

Procedures should be in place and used.

Record keeping should ensure requirements in relation to properly observing and using product labels and MSDS sheets, instruction manuals and written organisational procedures.

What personal protective equipment may be relevant to this standard?

Boots, hat/hard hat, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sun screen).

What equipment is used in the cleaning and fumigation of intensive production sheds?

Mechanised brooms, manual brooms, high-pressure cleaners, lawn mowers, hand tools, and sanitisers.

Why must equipment be raised or removed?

Equipment must be located to ensure ease of cleaning, and to ensure spray or fall off from equipment being cleaned does not cross contaminate already cleaned equipment.

What will determine whether or not equipment is dismantled?

This depends on whether equipment can be easily moved or cleaned in situ.

What areas inside and outside the sheds are cleaned and checked?

Rafters, fan cowls, insides, outsides, bases, tops of blinds and flaps, electrical boards, shed aprons, and shed work rooms.

What determines the hygiene standard in place in the production shed?

The level of hygiene required is dependent on the class of livestock being housed. It will require that the shed and fittings be scrubbed, washed and disinfected using steam or pressure cleaning equipment.

How might the flushing of lines be carried out?

Flushing tanks and lines is often done with an approved anti-algal sanitiser included, and treated water may be allowed to stand in lines prior to flushing. Flushing can dislodge algae and particles that can block valves in drinkers and cause flooding. Flushing also requires checking inline filters for efficiency of operation.

What are the key results required of sanitisers?

Detergents must remove surface gross materials and dust, and sanitisers work efficiently on cleaned surfaces where there is little soiling or faecal residue remaining.

What kinds of fumigants might be used?

They might be gases, vapours or fine misting sprays and can include a gaseous phase and liquid applications through aerosol. When handling and working with fumigants the operator should be mindful that they can be carcinogenic, and an irritant to the respiratory tract. They may also choke operators if inhaled in concentrated forms. Fumigants require strict operating procedures.

When and why might fumigation of the shed need to occur?

Fumigation may be done after clean out or after equipment is set up. Fumigants may be used to increase efficacy of sanitisers in sheds.

How might information be documented?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in the cleaning and fumigation of intense production sheds requires evidence that minimum contamination remains from previous flock/herd, all surfaces inside and outside the shed are treated so that they are visually clean, and sanitisers are applied to cleaned surfaces.

The skills and knowledge required to clean and fumigate intensive production sheds must be transferable to a different work environment. For example, across a range of production shed types containing a variety of equipment set-ups and uses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- types of sheds and production systems
- relevant OHS legislation, regulations and codes of practice
- chemical spillage management and safety equipment and clothing.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- operate high pressure washing equipment
- read and interpret cost sheets, production information, target statistics, quantities of feed and other inputs, job performance audits, and MSDS
- prepare and present production and other information in a manner that is readily accessible for both management and operators
- observe, identify and react appropriately to environmental implications and OHS hazards
- make shed environment safe to accidental entry of personnel until environment is safe.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3712A

Unit Descriptor

Administer medication to animals

This competency standard covers the process of responsibly using medicine in treating animals. When the requirements of this standard are achieved, medications will be administered strictly in compliance with veterinary advice, instruction, and relevant regulations. Where necessary, professional veterinary or pharmaceutical support is engaged to administer medication.

This standard requires the application of skills and knowledge to administer medication to animals in a manner that is safe for both the operator and the animal. Competency requires an awareness of animal health legislative requirements and codes of practice, animal welfare codes of practice, and enterprise workplace safe practices. The work in this standard is likely to be carried out under routine supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Prepare to administer medication	1.1 Work to be undertaken is interpreted from organisation work procedures or direct instructions, and confirmed with management. 1.2 Equipment for the work is selected, checked and hygienically cleaned where necessary. 1.3 Suitable personal protective equipment is selected, used and maintained.
2. Administer medicine	2.1 While handling the animal(s), OHS hazards are continually identified, risks assessed, and suitable controls are implemented. 2.2 Administration of medication in the treatment of infection, disease or injury is carried out in the full cognisance of relevant regulations, and veterinary drug legislative requirements 2.3 Medication use in the treatment of infection, disease or injury is in line with the recommended dose rate/limits. 2.4 Medication use in the treatment of infection, disease or injury is recorded and notified as required by regulations.
3. Complete administration activities	3.1 Details of medication administration are recorded accurately according to organisational practices and relevant regulations. 3.2 Syringes, needles and other veterinary medicine containers are placed in allocated disposal containers, with tips removed from needles prior to disposal. 3.3 Any observed irregular behaviours are reported to the manager or health professional so decisions on any necessary changes to treatments can be made. 3.4 All records made, kept and maintained are clear, accurate, and follow the guidelines laid down by the industry and the organisation.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	When communicating with veterinarians and supervisors.	3
Collecting analysing and organising information	In the analysis and organisation of veterinary recommendations and animal histories.	3
Planning and organising activities	In organising animal treatment.	3
Working with others and in teams	When working with others to achieve goals.	3
Using mathematical ideas and techniques	When calculating weights and dosages.	3
Solving problems	In dealing with problems of animal health.	3
Using technology	In administering medication and monitoring health.	3

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What may be covered under medication?

Medication may cover drugs used to treat animal infection, injury and disease including vaccines, antibiotics, probiotics, and hormones such as oxytocin.

What organisation work procedures may apply to this standard?

Work procedures will be based on sound agricultural principles and practices and may include supervisors oral or written instructions, livestock production program, organisation standard operating procedures, specifications, routine maintenance schedules, work notes; product labels and Material Safety Data Sheets; manufacturers service specifications and operators manuals, waste disposal, recycling and re-use guidelines, and OHS procedures.

It is the responsibility of the manager or trainer to ensure that any drugs used are used in accordance with instruction from the veterinarian (or changed to include probiotics), and that all relevant authorities are notified, as required, when they are used.

What personal protective equipment may be relevant to this standard?

This may include boots, helmet, overalls, gloves, protective eyewear, hearing protection, respirator or face mask, and sun protection (sun hat, sunscreen).

What actions could be taken to eliminate or minimise the OHS risk?

Relevant OHS hazards identification, risk assessment and risk control measures include safe work systems and procedures for:

- reducing kicks, bites and crushing injuries from animals - this will include using calm and positive actions to avoid alarming stock
- manual handling systems and procedures
- preventing infection from injured/sick stock
- systems and procedures for outdoor work, including protection from solar radiation
- selecting, using and maintaining relevant personal protective equipment
- systems and procedures for the safe disposal of sharps and protocols for notification of needle stick injuries
- clear communication between workers, especially when working together within a close proximity.

All working routines for animals must be carried out in line with the provisions of the Workplace Health and Safety Acts and relevant animal codes of Biosecurity and Welfare.

How might information be recorded?

Record keeping systems used may be either paper-based or digital, and information will be recorded into logbooks or other records.

What relevant information might be recorded?

Dates, times and periods of work and maintenance, maintenance that is required for stables and/or equipment, work schedules and work completed, chemicals and other substances used including quantities and methods, and readings from temperature and flow-rate gauges.

How will the administration of medication be undertaken?

They will be administered in line with Schedule 4 of the Poisons Act in the various States and may be in the form of a nasal drench, oral drench, paste, intravenous injection, intramuscular injection or topical application, in feed or water (including through supplementary drinkers), but they must be in line with the Veterinary Surgeons Act in each State.

EVIDENCE GUIDE

Competence in practicing administering medication requires evidence that treatment of infection, disease or injury is carried out safely and with the full cognisance of relevant regulations and veterinary drug legislative requirements.

The skills and knowledge required to practice responsible use of medicine must be transferable to a different work environment. For example this may include different animals, breeds, sizes and uses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- the consequence of administering medication to animals
- animal first aid procedures and the limits to which they should be applied by personnel at all levels, until professional help is available
- sources of advice with regard to medication
- property policy with regard to medication.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- provide support to animal health professionals, as required
- observe animal condition and health, and accurately record and report observations
- complete specified protocols with regard to medication.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3713A

Unit Descriptor

Carry out workplace OHS procedures

This competency standard covers the process of carrying out enterprise Occupational Health and Safety (OHS) policies and procedures. The unit is also concerned with OHS responsibilities of employees with supervisory responsibilities. It requires the ability to work in accordance with workplace procedures in hazard identification and risk control, carry out safe practices during work operations, and participate in arrangements for maintaining the health and safety of all people in the workplace. Carrying out OHS policies and procedures requires knowledge of employee and employer responsibilities under the OHS Act, enterprise procedures relating to hazards, fires, emergencies, accidents and risk control, and OHS signs and symbols relevant to area of work.

Note: This unit is based on the national guidelines for integrating OHS competencies into National Industry Competency Standards.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Adapt OHS policies and procedures	1.1 Information regarding the organisation OHS policies and procedures is made readily accessible to all employees. 1.2 Employee responsibilities prescribed in OHS legislation, codes and national standards are identified and carried out. 1.3 Employee responsibilities prescribed in enterprise OHS policies and procedures (including emergency procedures) are identified and carried out.
2. Assist in workplace hazard identification and risk control	2.1 Information regarding hazard identification and risk control is provided and explained regularly. 2.2 Hazards in the workplace are recognised and reported to designated personnel according to enterprise procedures. 2.3 Assessment of risk associated with identified hazards is made in accordance with enterprise procedures. 2.4 Workplace procedures and work instructions for controlling risks are followed accurately. 2.5 Risks to fellow workers, other people and animals are recognised and action is taken to eliminate or reduce them. 2.6 Safety training is undertaken or provided as necessary.

- 3. Observe safe practices during work operations
 - 3.1 Work requiring **personal protective equipment** (PPE) is identified, used, maintained and stored according to enterprise procedures.
 - 3.2 Basic safety checks on all machinery and equipment are undertaken before operation according to enterprise procedures.
 - 3.3 Hazards associated with handling of hazardous substances are identified and notified, and risk assessed in accordance with enterprise **procedures** and OHS requirements.
 - 3.4 Noise hazards are identified and notified, and risk assessed in accordance with enterprise procedures and OHS requirements.
 - 3.5 **Manual handling** risks are assessed prior to activity, and work carried out according to currently recommended safe practice.
 - 3.6 Information on OHS for specific work operations is accessed as required.
- 4. Participate in arrangements for maintaining health and safety of all people in the workplace
 - 4.1 Individuals have input into on going monitoring and reporting on all aspects of workplace safety.
 - 4.2 OHS issues are raised with designated personnel in accordance with enterprise procedures and relevant OHS legislation.
 - 4.3 Contributions to **participative arrangements** in the workplace are made within organisational procedures and scope of responsibilities and competencies.
 - 4.4 Suggestions are made to assist the development of effective solutions to control the level of risk with enterprise activities.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By raising OHS issues verbally with other employees.	2
Collecting analysing and organising information	By recognising hazards, keeping maintenance records and reporting accidents and dangerous occurrences.	2
Planning and organising activities	Carrying out OHS procedures requires some planning and organising.	2
Working with others and in teams	Carrying out OHS procedures may require participation with others in a team.	2
Using mathematical ideas and techniques	To determine liquids and weights used in the workplace.	2
Solving problems	To determine appropriate action in emergency.	2
Using technology	By the use of communication equipment to raise OHS issues.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What legislation, codes and national standards may be relevant to the workplace?

Industry codes of practice, award and enterprise agreements, relevant industrial instruments, and relevant legislation from all levels of government that affects business operation.

OHS legislative requirements vary from State to State (or Territory) and may include common law duties to meet the general duty of care requirements, requirements for the maintenance and confidentiality of records of occupational injury and disease, provision of information, induction and training, regulations and approved codes of practice relating to hazards present in the work area, health and safety representatives and health and safety committees, and prompt resolution of OHS issues.

OHS policies and procedures may include procedures for hazard identification, procedures for risk assessment, selection and implementation of risk control measures, incident (accident) investigation, OHS audits and safety inspections, consultative arrangements for employees in work area, hazard reporting procedures, safe operating procedures/instructions, and the use and care of personal protective equipment.

What employee responsibilities in OHS legislation may be included in this unit?

Co-operation with the employer/supervisor in any action taken to comply with OHS legislation, taking reasonable care for own health and safety; and accepting responsibility for protection of the health and safety of others through avoidance of personal action which puts others at risk. This includes smoking in the workplace, use of substances which modify mood or behaviour, inappropriate behaviour, not wilfully interfering with or misusing anything provided to protect health and safety, or not wilfully placing at risk the health or safety of any person in the workplace.

Which OHS emergencies may apply to this unit?

Electrocution, fire, flood, chemical spills, storms and cyclones, gases in confined spaces, gas leaks, serious injury associated with tractors, machinery and equipment, animals, vehicles, firearms and grain suffocation.

What hazards in the workplace may be included?

Equipment and machinery operation and maintenance (including powered tools), vehicles, noise, chemicals, gases, dust, manual handling, plants and animals/livestock, solar radiation, electricity, overhead hazards including powerlines, confined spaces, tripping hazards, water bodies, firearms, explosives, damaged or broken structures, damaged or worn equipment, items blocking exits, items of equipment in areas used for access, poor surfaces, and spillages and breakages.

What risks to people might be relevant?	Drowning in waterways, run over and injury associated with vehicles and machinery, machinery entanglement, exposure to noise, splash, scalding, and drift and volatility of chemicals.
What OHS training may be relevant?	OHS induction, specific OHS training, safe machinery operation and maintenance, hazard identification and assessment, and safe chemical use.
What might be included in workplace for which protective clothing or equipment could be required?	Noise associated with plant, machinery and animals, pesticides, dusts, work in the sun, welding and use of grinders. Personal protective equipment (PPE) may include ear, eye and chemical protection, protective clothing, sunscreen lotion, gloves, safety harness and headgear.
What procedures may be included?	Hazard policies and procedures, emergency policies and procedures, procedures for use of personal protective clothing and equipment, hazard identification and issue resolution procedures, job procedures and work instructions, reporting procedures, and the installation of workplace safety signage.
What could be some of the manual handling hazards?	Moving, lifting, shovelling, loading materials, pulling, pushing, up-ending materials, hand tool use, storing materials at heights too high or too low, bending, repetitious tasks, and handling plants and animals.
What may constitute participative arrangements?	OHS committees and team or work group meetings.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in carrying out OHS procedures requires evidence that hazards have been recognised, reported and acted upon, that relevant workplace procedures are complied with, and that contributions have been made to participative arrangements. The skills and knowledge required to carry out OHS procedures must be transferable to a range of work environments and contexts. For example, this could include different workplaces, OHS issues, work situations and teams.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- employee and employer responsibilities under the OHS Act
- enterprise procedures relating to hazards, fires, emergencies, accidents, and risk control
- OHS signs and symbols relevant to area of work.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- apply workplace procedures for hazard identification and risk control
- ability to **direct** others in identifying hazards, controlling risks, and following other OHS enterprise requirements
- ability to **read** safety warning signs
- **observe and direct** others to follow safe working operations
- participate in arrangements for maintaining the health and safety of all people in the workplace
- accurately record incidents in the work area in accordance with OHS legal requirements.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3714A**Maintain and monitor environmental work practices****Unit Descriptor**

This competency standard covers the process of maintaining and monitoring positive environmental work practices. It requires the ability to recognise basic environmental hazards and threats. It includes the ability to follow and give workplace directions and instructions by communicating accurately with supervisors and workplace colleagues, and to keep records. Maintaining and monitoring environmental work practices requires awareness of, and an ability to implement relevant environmental legislation, policies and workplace/industry practices. Effective methods of improving environmental performance and environmental issues especially in regard to water catchments, air, noise, ecosystems, habitat, efficient use of resources, sustainability and waste minimisation, are also necessary.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Maintain workplace environmental procedures	1.1 Workplace procedures and work instructions for integrated environmental work practices for own work area are recognised, followed and conveyed to team members. 1.2 Relevant legislation, codes and national standards that impact on workplace environmental practices are recognised, conveyed to team members and followed.
2. Recognise and report on potential environmental threats	2.1 Existing and potential environmental risks and hazards are identified, reported to designated personnel and dealt with. 2.2 Location and extent of the potential environmental threat are accurately recorded. 2.3 Reports on the potential environmental threat are completed according to enterprise guidelines.
3. Support continuous improvement of environmental work practices	3.1 Information is gathered and improvements are suggested to support the development of improved environmental workplace practices. 3.2 Environmental issues and their relationship to workplace practices are discussed in the workplace. 3.3 Changes to workplace approaches to environmental practices are responded to positively and promptly in accordance with enterprise requirements. 3.4 Individuals/teams are informed of the results of environmental improvements in the workplace. 3.5 Environmental training needs of the work team are identified, and training is sought where required.
4. Maintain environmental records	4.1 Environmental records are accurately and legibly maintained and stored securely in a form accessible for reporting purposes. 4.2 Internal and external reporting procedures are identified and maintained.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Verbally with supervisors and work colleagues on environmental work practices and potential hazards and risks.	2
Collecting analysing and organising information	Through maintaining and analysing environmental records.	2
Planning and organising activities	According to enterprise environmental and work place practices and policies.	2
Working with others and in teams	Through working with others to follow and improve environmental practices.	2
Using mathematical ideas and techniques	Through quantification (e.g. counting, estimating areas) of environmental hazards or problems and through collection of data.	2
Solving problems	Through recognition of and responses to environment hazards and risks, and determining ways that work practices can be more environmentally friendly.	2
Using technology	Technology may be required to record information, deal with environmental hazards, and improve work practices to be more environmentally friendly.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available. At this level, individuals work within the context of enterprise policies and procedures. Individuals at this level may have responsibility for day-to-day operations and supervising/managing others.

What might environmental workplace procedures include?

These could include written procedures or work instructions for environmental hazard and risk identification, avoiding or minimising environmental risks, improving environmental performance, waste minimisation and segregation, environmental monitoring, signs and labels (e.g. chemical labels), emergency procedures, hazard and incident recording and reporting procedures, and environmental data recording and reporting procedures where applicable. Verbal instructions from persons with responsibility related to environmental work practices are also included in this definition.

What may be listed under environmental policies?	Waste minimisation and management, sustainability, local, regional, State and National strategies on weed and pest management, protection of land and habitat and the conservation of resources, energy use, greenhouse gas emissions, use of chemicals, and plant and equipment.
What does recognise and follow mean?	That a person will acknowledge that environmental impacts, hazards and risks exist, and that they have a responsibility to work in a manner which will minimise the impact on the environment within the guidelines established by the workplace.
What legislation, codes and national standards may be relevant to this competency standard?	Award and enterprise agreements, relevant environmental legislation from all levels of government, Australian standards, international agreements and relevant industry codes of practice.
How may a report be made?	Verbally (face-to-face or through communication equipment) and in writing (notes, faxes, email or electronic messages).
What environmental risks and hazards may be included in this competency standard?	These could include spills, leaks, pollution, planned and unplanned emissions, soil compaction, disturbance and erosion, accidents and disposal of waste, and damage or disruption to ecosystems resulting from work practices. Also includes plants, animals or diseases that are classified as an environmental threat or problem in an area, unauthorised changes in land use, fire risks and threats, and inappropriate human interaction on the environment. This may include damage to habitat resources, disruption of animal behaviour and territorial use, illegal vegetation clearance, seed collection, firewood gathering, nest disturbance and egg collecting.
Who are designated personnel in a workplace?	Manager, supervisor, and people who are responsible for work area or who may be assigned to act as a mentor/trainer to a person under instruction.
What suggestions may be included?	Ideas to minimise hazards and risks, reduce waste, make more efficient use of resources and improve environmental performance, reduce soil disturbance and improve habitat resources.
What environmental issues are included in this competency standard?	Sustainability, reduction and disposal of waste, water quality, energy efficiency, biodiversity and habitat protection, conservation of natural resources, air quality, land contamination, noise, soil and salinity management, and fire management.

What workplace approaches to environmental practices may be relevant to this competency standard?	Preventing and minimising the production of pollution (e.g. discharges to air, land and water, hazardous waste, reducing 'burning off', composting, recycling materials, conservation practices), and improving workplace maintenance practices (e.g. using a broom instead of a hose, using environment-friendly cleaning agents).
What environmental records may be included?	Environmental data, maintenance and inspection reports, incident or accident reports, and complaints from the public.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in monitoring and maintaining environmental work practices requires evidence that skills and knowledge have been successfully and appropriately applied and demonstrated in a work place or equivalent situation. The skills and knowledge required to monitor and maintain environmental work practices must be transferable to a range of work environments and contexts. For example, this could include different workplaces, environmental hazards and risks, and workplace practices and procedures.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- relevant legislation from all levels of government on environmental issues
- relevant environmental policies and workplace/industry practices and procedures
- good practice approaches relevant to work area particularly in regard to minimising environment hazards and risks, and improving environmental performance
- environmental issues, especially in regard to water catchments, air, noise, ecosystems, habitat, efficient use of resources, sustainability and waste minimisation
- potential environmental threats and problems relevant to a given region and occupation
- general work place practices and their potential impact on the environment .

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- communicate with supervisors and workplace colleagues
- recognise environmental hazards and threats
- act upon environmental hazards and threats by following enterprise procedures legislative requirements
- instruct/advise others to follow enterprise procedures and legislative requirements
- follow workplace directions and instructions
- keep environmental records.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3801A

Unit Descriptor

Provide on-job training support

This competency standard covers the process of providing on-job training support within an enterprise. It requires the ability to identify needs, support and provide follow-up and support to learner with on-job training support. Providing on-job training support requires knowledge of adult learning principles, setting up on-job training support, approaches to on-job training support, resources required for on-job training support, reviewing and reporting on on-job training support and OHS issues related to on-job training support.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Identify needs for on-the-job training support	1.1 Training needs are determined in consultation with supervisor and employee/trainee. 1.2 Extent and scope of training support to be provided is agreed with the supervisor. 1.3 Outcomes from training are defined prior to commencement. 1.4 Methods of providing on-job training support is clarified and agreed with supervisor.
2. Support on-the-job training	2.1 Training outcomes are clearly indicated to the learner. 2.2 Training is delivered as directed and in accordance with workplace procedures and relevant legislation . 2.3 Practice opportunities are provided to re-enforce the training.
3. Provide follow-up and support to learner	3.1 Opportunities to apply competencies on-the-job are provided. 3.2 Constructive feedback and coaching are provided to assist learning. 3.3 Feedback of employee's progress is given to the supervisor in the workplace.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through interpreting training materials.	2
Collecting analysing and organising information	Through consultation and analysis of training needs with supervisors and trainee.	2
Planning and organising activities	According to adult learning principles and on-job training procedures.	2
Working with others and in teams	Through working co-operatively in providing training support across a team.	2
Using mathematical ideas and techniques	Through support for training where work tasks involve calculations.	2
Solving problems	Through on-going analysis of outcomes and dealing with contingencies and knowledge gaps in training support as they arise.	3
Using technology	Through use of computers and communication systems.	3

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What may assist in determining training needs?

Industry/enterprise or other performance standards, endorsed components of relevant industry training packages, industry/workplace training practices, job descriptions, results of training needs analyses, business plans of the organisation which identify skill development requirements and standard operating and/or other workplace procedures.

What methods may be relevant to providing training support?

Demonstrations, explanations, problem-solving, mentoring, experiential learning, group work, on-the-job coaching, job rotation or a combination of the above.

What workplace procedures and relevant legislation may be relevant to this competency standard?

Award and enterprise agreements, related to OHS and environmental issues, relevant industry codes of practice, and standard operating procedures.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing on-job training support requires evidence that on-job training support has been successfully and appropriately provided in an enterprise. The skills and knowledge required to provide on-job training support must be transferable to a range of work environments and contexts. For example, this could include different work places, training arrangements, competencies and trainees/learners.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- adult learning principles
- setting up on-job training support
- approaches to on-job training support
- resources required for on-job training support
- reviewing and reporting on on-job training support
- OHS issues related to on-job training support.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- identify needs for on-the-job training support
- provide follow-up and support to learner.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3806A

Unit Descriptor

Provide advice and sell farm chemicals

This competency standard covers the process of providing advice on and selling farm chemicals. Information may need to be provided on appropriate farm chemicals and how to apply them.

It requires the application of knowledge and skills to interact with customers, address customer needs, and provide appropriate advice to customers regarding the appropriate and safe use of chemicals. Competency is also required in selling chemicals, and in arranging for the safe and efficient handling and storage of chemical products, applications and associated products. The work in this standard will be carried out with limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs . 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3 Available products are matched to customer needs and against environmental considerations . 1.4 Knowledge and understanding of farm chemicals is actively and regularly researched and updated from authoritative sources .
2. Provide product advice	2.1 Advice that addresses customer needs is provided in a timely and professional manner . 2.2 Environmental considerations, non-chemical alternatives and additional products are considered and discussed with customers. 2.3 Customers concerns and questions are addressed sensitively in line with enterprise requirements. 2.4 Quotations are prepared and supplied in accordance with enterprise requirements.
3. Sell products	3.1 Sales are completed in accordance with enterprise requirements and to customers satisfaction. 3.2 Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures. 3.3 Sales results are monitored against specified criteria . 3.4 Sales techniques are reviewed to enhance future sales results.
4. Handle and maintain products	4.1 Products are handled and stored safely and efficiently in line with manufacturer, enterprise and OHS guidelines. 4.2 Documentation is completed in line with enterprise requirements. 4.3 Stock levels are monitored and re-ordering procedures followed in line with enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Advice and information about customer requirements and chemicals and their applications may be discussed with customers, suppliers, and other appropriate personnel. Technical information regarding chemicals and their application needs to be conveyed to customers in a manner that ensures the customer understands the products application, its limitations, safe application and related information.	2
Collecting analysing and organising information	Customer requirements may need to be processed. Information with regard to chemicals may be documented for legislative and re-ordering purposes.	1
Planning and organising activities	Provision of advice may need to be structured and potential chemical application considered to ensure all circumstances are accounted for, and chemical product is correct for application.	1
Working with others and in teams	Consultation with other members of the work team to safely handle, store and transport chemicals, and to ensure customer satisfaction.	1
Using mathematical ideas and techniques	Mathematical techniques may be applied in the measurement of quantities to meet application and formula specifications, calculation of volumes, and the pricing of stock supplies.	2
Solving problems	Problems relating to matching customer requirements to correct product and in helping customer to understand technical information.	2
Using technology	In calculating volumes and quantities for product formulation, purchase, and for recording sales and re-ordering.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What interpersonal skills might be considered appropriate when identifying customer needs?

Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, seeking feedback from the customer to confirm understanding of needs, questioning to clarify and confirm the customers needs, listening and responding appropriately to what the client is communicating, using appropriate tone, having regard for manner, and personal space considerations.

It may include checking with client to determine: budget considerations, exact requirements, current pest management techniques, and tactics utilised on site.

What customer needs might be identified?

These may include specific needs of customers depending on job requirements and specifications. They may also relate to the need for specialised or technical assistance.

Customer needs may relate to a type of pest to be eradicated or controlled, the environment in which chemical is to be applied, reasons for chemical application, and previous attempts to eradicate or control the problem.

What enterprise procedures might need to be adhered to?

"Meet and greet" procedures for customers, store policy and procedures on customer service and sales, and provision of advice. Enterprise policy might include "hard, suggestive or soft sell" techniques.

What products might be assessed against customer requirements?

Required and potential chemical formulations need to be matched to suitable and available proprietary products. Alternative products to chemical applications may need to be considered.

Chemical formulations may include emulsifiable concentrates, sundry formulations, solutions, emulsion, water in oil, ULV, oil in water, soluble powders, capsule suspension, wettable powders, powder for dry seed treatment, suspensions concentrates, smoke generator, water dispensable; granules, paste, dusts, pour on, baits, spot-on, granules and pellets, boluses, fumigants, antibiotics, injectables, and vaccines.

What environmental considerations need to be considered?

The environment in which the chemicals are to be applied, crops, livestock, flora, fauna and human exposure to chemicals, concentrations, residual levels, toxicity, run off, and the disposal of containers and contaminated waste need to be considered.

What authoritative sources might be accessed?	Specialist advice from manufacturer/supplier or technical expert within enterprise or attached to manufacturer/supplier may be sought. Journals, books and audio-visual materials might also be accessed.
What advice might customers require?	Advice could be written or verbal and should cover: Integrated Pest Management (IPM) systems, the identification of the most suitable product and materials for the application, advantages, disadvantages, features and benefits of various products, legal and safety requirements, safe handling, usage and storage, and chemical and non-chemical alternatives. Advice should also cover: quantities and rebates, product durability, pest management tactics, potential hazards, relevant label information, alternative application strategies and advice on additional equipment such as applicators and spray equipment, potential hazards, and personal protective equipment requirements (which may include fitting or demonstration of product). Additional advice could include manufacturer recommendations on chemical applications, potential environmental and residual considerations, corrosive implications, cleaning and maintenance requirements, information on toxicity levels, potential effects on health of human/animals and non-target organisms, advice on correct disposal of containers, and provision of Material Safety Data Sheets (MSDS) at point of sale.
How might advice be provided in a timely and professional manner?	Using appropriate interpersonal skills, advice should be provided after gaining customers attention and/or permission in a manner that is readily understood by the customer and addresses their information needs.
What might be included in non-chemical alternatives?	Non-chemical alternatives could include the use of pest resistant crop varieties, or use of organic alternatives.
What additional products might be suggested?	Alternative, additional and specialist products and services as "add on sales" that would meet identified need and customer requirements, or could be needed to complete the application such as: Applicators such as knapsack sprays, boomsprays and blast sprays. Alternative applications such as spotting, flooding, dusting, injection, baits, fumigation, and aerial spraying. Personal protective equipment such as overalls, rubber boots, aprons, goggles, face shields, waterproof gear, dust masks, gloves, respirators, and hats.

What are the important considerations in giving prices and quotations?

Quotations may be written or verbal and should be consistent with customer requirements and enterprise policy.

What might be included in add-on and repeat sales?

Add-on sales could include alternative, additional and specialist products and services that would meet identified need and customer requirements, or could be needed to complete or complement the application or initial purchase. For example, additional equipment materials or accessories.

Repeat sales include opportunities to encourage further business at a later date, and to promote further contact with the store/business including customer receiving brochures and notices of sales promotions.

What specified criteria might be applied?

Criteria might include sales targets, merchandising outcomes, promotions, matching of products and services to customer need, and ongoing feedback from sales activities.

What are the important considerations in handling and storing products safely and efficiently?

These may include reliable sources and suppliers of chemicals formulations and the need to ensure goods are packaged, transported and delivered safely.

There may also be a need to match products to be supplied to appropriate documentation and ensure compliance with Australian Dangerous Goods and HAZCHEM codes and regulations.

Other considerations include ensuring that compliance with duty of care responsibilities are observed; products are stored safely and securely and in line with HAZCHEM codes/regulations and other regulatory and legislative requirements.

Storage practices should reflect industry best practice to maximise longevity of product.

What documentation might need to be completed?

Completion of MSDS, relevant label information relating to the application is recorded at point of sale, quantity and code slips for register staff, and clearance slips, order forms and consignment documents may be required.

What re-ordering procedures might be necessary?

Recording of sales, completion of stock control/movement records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing advice and selling farm chemicals requires evidence that demonstrates the ability to advise customers as to the most appropriate products for their specific application/environment, and to understand customer requirements. It involves the ability to engage with and give advice to customers to ensure that product application and its suitability is understood by the customer. The ability to encourage add on sales and to represent the enterprise in a professional manner when dealing with customers is also required. The legislative requirements, potential hazards and relevant label information needs to be explained to customers to minimise the likelihood of accidents, incorrect application, hazards and potential litigation.

The skills and knowledge required to provide advice and sell farm chemicals must be transferable to a different work environment. For example, if competence is demonstrated in providing advice on farm chemicals in a large enterprise environment, it should also be demonstrated in small or medium enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- potential environmental impact of chemicals
- enterprises business values, structure, products and services
- chemical formulations, available proprietary products and their applications
- industry terminology for products
- labelling specifications
- requirements of local or specific customers
- relevant HAZCHEM, AGSAFE, Australian Dangerous Goods, OHS, industry, fair trading, trade practices, and sales of goods legislation
- enterprise policies and procedures relating to customer service
- relevant licences/accreditation regarding the sale and handling of farm chemicals.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate using a range of interpersonal skills, including questioning and active listening skills
- engage customers, especially in relation to giving advice, receiving information and creating additional sales opportunities
- relate to people from a range of social, cultural and ethnic backgrounds and of varying physical and mental abilities
- assess and demonstrate cost benefits
- research supplier information.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3807A**Unit Descriptor****Provide advice and sell machinery**

This competency standard covers the process of providing advice and selling farm machinery. Information may need to be provided on agricultural and small machinery, spare parts and building products.

It requires the application of knowledge and skills to interact with, engage and understand customer requirements, as well as the ability to provide appropriate advice to customers on the use and suitability of products and on alternative and additional products. The ability to sell and safely handle machinery is also required. The work in this standard will be carried out with limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs . 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3 Available products are matched to customer needs. 1.4 Knowledge and understanding of machinery and related products is actively and regularly researched and updated from authoritative sources .
2. Provide product advice	2.1 Advice that addresses customer needs is provided in a timely and professional manner . 2.2 Products that may meet customer needs are appropriately exhibited to customer. 2.3 Customers concerns and questions are addressed sensitively in line with enterprise requirements. 2.4 Quotations are prepared and supplied in accordance with enterprise requirements.
3. Sell products	3.1 Sales are completed in accordance with enterprise requirements and to customers satisfaction. 3.2 Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures. 3.3 Sales results are monitored against specified criteria . 3.4 Sales techniques are reviewed to enhance future sales results.
4. Handle and maintain products	4.1 Products are handled and stored safely and efficiently in line with manufacturer, enterprise and OHS guidelines. 4.2 Documentation is completed in line with enterprise requirements. 4.3 Stock levels are monitored and re-ordering procedures followed in line with enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Advice and information about customer requirements and products may be discussed with customers, suppliers and other appropriate personnel. Technical information regarding products needs to be conveyed to customers in a manner that ensures the customer understands the products application and related information.	2
Collecting analysing and organising information	Customer requirements may need to be processed. Information with regard to products may be documented for ordering/re-ordering purposes.	1
Planning and organising activities	Provision of advice may need to be structured, and product application thought through to ensure all usage considerations are accounted for and product is correct for application.	1
Working with others and in teams	Consultation with other members of the work team to maintain products and to ensure customer satisfaction.	1
Using mathematical ideas and techniques	Mathematical techniques may be applied in the measurement of quantities to meet purchase or job requirements, calculation of volumes, and the pricing of stock supplies.	2
Solving problems	Problems relating to matching customer requirements to correct product and in helping customer to understand technical information.	2
Using technology	In calculating volumes and quantities for purchase, and for recording sales and re-ordering.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What interpersonal skills might be considered appropriate when identifying customer needs?

Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, seeking feedback from the customer to confirm understanding of needs, questioning to clarify and confirm the customers needs, listening and responding appropriately to what the client is communicating, using appropriate tone, having regard for manner, and personal space considerations.

It may include checking with client to determine budget considerations, exact requirements and the specific application.

What customer needs might be identified?

These could include the specific needs of customer depending on job requirements and specifications. May also relate to the need for specialised or technical assistance.

What enterprise procedures might need to be adhered to?

"Meet and greet" procedures for customers, store policy and procedures on customer service and sales, and provision of advice. Enterprise policy might include "hard, suggestive or soft sell" techniques.

What products might be assessed against customer requirements?

Agricultural machinery and spare parts for wheeled and crawler tractors, farm vehicles (including 2,3,4 wheel motorcycles), all terrain vehicles, tractor mounted and linked implements, and specialised equipment for local/regional area. (Spare parts might be identified from samples, inventory system, catalogues).

Accessories such as oil and lubricants, tools, additives, sealants, fastenings and fixings, engineering supplies generally, bearings, and for all terrain vehicles - winches, wire cable, bull bars, body re-enforcements radios (including 2-way), air conditioners, comfort accessories, tyres, and customising accessories.

Small machinery including mowers (motor and ride-on), brushcutters, electricity generators, hedgecutters, motorised pumping/spraying equipment, grass slashers, chainsaws, mulchers, tillers, rotary hoes, and dairy machinery.

Building products including structural cladding timber, cement, galvanised or zincalume cladding, fibrous cement sheet, colorbond cladding, roofing and plumbing materials, insulation and damp-proofing materials, pre-fabricated buildings, and builders hardware.

Personal protective equipment may also be recommended/required, for example, ear/face protection, safety helmets/trousers, protective footwear, gloves and glasses.

What authoritative sources might be accessed?

Specialist advice from manufacturer/supplier or technical expert within enterprise or attached to manufacturer/supplier may be sought.

Journals, books, samples, inventory systems, catalogues and audio-visual materials might also be accessed.

What advice might customers require?

Advice could be written or verbal, and could cover: identification of most suitable product and materials for the application; trade-in valuations; price, delivery and availability of product, advantages, disadvantages, features and benefits, legal and safety requirements; operating instructions, and safe handling.

Advice should also cover quantities and rebates, product durability, and personal protective equipment requirements (which may include fitting or demonstration of product).

Additional advice could include warranty information, servicing/repair requirements, customer and store obligations; potential finance arrangements; operation of parts accessories and products, specialised equipment, cleaning products, where required, and information on condition of purchase or trade-in might need to be provided.

How might advice be provided in a timely and professional manner?	Using appropriate interpersonal skills, advice should be provided after gaining customers attention and/or permission in a manner that is readily understood by the customer and addresses their information needs.
How might products be exhibited?	Arrangements may need to be made for products to be showcased or safely exhibited. Products may also be exhibited and promoted through brochures, leaflets, video displays, company sales representatives, product information sessions, or exhibits of existing systems.
What are the important considerations in giving prices and quotations?	Quotations may be written or verbal and should be consistent with customer requirements and enterprise policy.
What might be included in add-on and repeat sales?	Add-on sales could include alternative, additional and specialist products and services that would meet identified needs, or to complete or complement the application or initial purchase. For example, additional equipment materials or accessories, including supplementary or specialist products, and personal protective equipment may also be recommended including ear/face protection, safety helmets/trousers, protective footwear, gloves and glasses. Repeat sales include opportunities to encourage further business at a later date and to promote further contact with the store/business, including customer receiving brochures and notices of sales promotions.
What specified criteria might be applied?	Criteria might include sales targets, merchandising outcomes, promotions, matching of products and services to customer need, and ongoing feedback from sales activities.
What are the important considerations in handling and storing products safely and efficiently?	Products are housed/stored safely and securely, and reflects industry best practice to maximise longevity of product.
What documentation might need to be completed?	Quantity and code slips for register staff, clearance slips, warranty order forms, purchase order forms and consignment documents may be required.
What re-ordering procedures might be necessary?	Recording of sales and completion of stock control/movement records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing advice and selling machinery requires evidence that demonstrates the ability to advise customers as to the most appropriate products for their specific application/environment, and to understand customer requirements. It involves the ability to engage with and give advice to customers, and ensure that the advice, product type, application and suitability are understood by the customer. The ability to encourage add on sales, organise the demonstration of products, provide additional advice, and to represent the enterprise in a professional manner when dealing with customers is also required.

The skills and knowledge required to provide advice and sell machinery must be transferable to a different work environment. For example, if competence is demonstrated in providing advice on small agricultural equipment, it must also be evident in providing information on spare parts and accessories in a small, medium or large enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- customer service and selling techniques
- systems and procedures for the safe handling of machinery
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- nature of agricultural activities in district
- industry trends and improved practices in relation to machinery usage and equipment
- systems and procedures for the safe handling of machinery and parts
- manufacturers product recommendations and warranty requirements
- relevant OHS, industry, fair trading, trade practices, and sales of goods legislation
- relevant components of State/Territory Acts relating to machinery and its use.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate using a range of interpersonal skills, including questioning and attentive listening skills
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess and demonstrate cost benefits
- valuing trade-ins
- research supplier information
- demonstrate equipment
- safe lifting, carrying and handling techniques.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3808A

Unit Descriptor

Provide advice on agronomic products

This competency standard covers the process of providing advice on agronomic products, including fertilisers. Information may be necessary on a wide range of seeds including pasture seeds.

It requires the application of knowledge and skills to interact with, engage and understand customer requirements as well as the ability to provide appropriate advice to customers on the use and suitability of products and alternative and additional products. The work in this standard will be carried out with limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT

PERFORMANCE CRITERIA

1. Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs . 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3 Available products are matched to customer needs and against ecological considerations . 1.4 Knowledge and understanding of agronomic products is actively and regularly researched and updated from authoritative sources .
2. Provide product advice	2.1 Advice that addresses customer needs is provided to customers in a timely and professional manner . 2.2 Products that may meet customer needs are appropriately exhibited to customer. 2.3 Alternative and additional products and services are suggested as necessary. 2.4 Customers concerns and questions are addressed sensitively in line with enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Advice and information about customer requirements and products may be discussed with customers, suppliers, and other appropriate personnel. Technical information regarding products needs to be conveyed to customers in a manner that ensures the customer understands the products application and related information.	2
Collecting analysing and organising information	Customer requirements may need to be processed. Information with regard to products may be researched and recorded.	1
Planning and organising activities	Provision of advice may need to be structured and product application thought through to ensure all components are accounted for and product is correct for application.	1
Working with others and in teams	Consultation with other members of the work team to decide on best fit for application, and to ensure customer satisfaction.	1
Using mathematical ideas and techniques	Mathematical techniques may be applied in the measurement of quantities to meet purchase or job requirements, calculation of volumes and the pricing of stock supplies.	2
Solving problems	Problems relating to matching customer requirements to correct product, and in helping customer to understand technical information.	2
Using technology	In calculating volumes and quantities needed to meet customers needs, and in accessing information about the product.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What interpersonal skills might be considered appropriate when identifying customer needs?

Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, seeking feedback from the customer to confirm understanding of needs, questioning to clarify and confirm the customers needs, listening and responding appropriately to what the client is communicating, using appropriate tone, having regard for manner, and personal space considerations.

It may include checking with client to determine budget considerations, exact requirements, proposed product usage, and environment/conditions in which product will be used

What customer needs might be identified?

These could include the specific needs of customer depending on job requirements and specifications. They may also relate to the need for specialised or technical assistance and the intended use of product and environment in which product is to be used.

What enterprise procedures might need to be considered?

"Meet and greet" procedures for customers including timing and nature of approach, store policy and procedures on customer service and sales, promoting products and encouraging sales. Enterprise policy might include "hard, suggestive or soft sell" techniques.

What products might be assessed against customer requirements?

Fertiliser: Urea, superphosphate, lime, blood and bone, potash, mixed fertilisers, trace elements, and speciality fertilisers.

Crop and seeds: Cereal crop including wheat, oats, barley, triticale, grey peas, maize lupins, and others appropriate to local district. Fodder and forage crop including choumoullier, turnips, swede, rape, and others appropriate to local district. Pasture species including subterranean, white and strawberry clover, annual perennial and short rotation rye grass, and others appropriate to local district.

What ecological considerations need to be taken account of?

Fertilisers: Identification of basic deficiency symptoms of plant samples, environmental and residual considerations, and basic nutrient requirements of crops.

Crops: District considerations such as prevailing soils and climate, perennial and annual plant species.

What authoritative sources might be accessed?	Specialist advice from manufacturer/supplier or technical expert within enterprise or attached to manufacturer/supplier may be sought. Journals, books and audio-visual materials might also be accessed.
What advice might customers require?	Advice should cover: the identification of the most suitable product and materials for the application; quantities needed; recommendations on planting, sowing and applying seeds, crops and/or fertiliser; advantages, disadvantages, benefits and limitations of various fertiliser mixes, seeds/crops; environmental and residual considerations; basic nutrient requirements of crops; availability, and any rebates for quantity purchased. Additional advice may be written or verbal, and include identification of safety and legal considerations in use, sales of products, correct usage of product; material handling hazards; personal protective equipment requirements (which may include fitting or demonstration of product); seed certification processes; identification of chemically-treated seed in line with established legislation; and establishment and maintenance requirements for crops and lawn. Advice provided should also take account of prevailing soils and climates, recommended species and seed mix for environmental conditions, and customer/store responsibilities. Additional advice could be provided on fertiliser application techniques such as mechanical spreading, fertilisers, spraying, aerial spreading, flooding, fertigation; legal implications of sale of fertiliser to customers; seed cleaning; and materials need for application.
How might advice be provided in a timely and professional manner?	Using appropriate interpersonal skills, advice should be provided after gaining customers attention and/or permission in a manner that is readily understood by the customer and addresses their information needs.
How might products be exhibited?	Arrangements may need to be made for products to be showcased or safely exhibited without wastage or contamination of seed. Products may also be exhibited though the use of audio-visual and written materials to highlight product and its application.
What alternative and additional products and services might be suggested?	Alternative products and services that would also meet job/customer requirements or could be needed to complete the application, such as more durable or cost effective alternatives. Tools needed in the construction or application of the product could also be included as "add on sales".

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing advice on agronomic products requires evidence that demonstrates the ability to advise customers as to the most appropriate products for their specific application/environment, and to understand customer requirements. It involves the ability to engage with customers and requires sufficient communication skills to ensure that advice on product type, suitability and application is understood by the customer. The ability to organise the demonstration of products, provide additional advice, encourage add on sales, and to represent the enterprise in a professional manner when dealing with customers is also required.

The skills and knowledge required to provide advice on agronomic products must be transferable to a different work environment. For example, if competence is demonstrated in providing advice on fertilisers in an agricultural setting, it must also be evident in providing information on seeds in a horticultural setting in a small, medium or large enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- customer service techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant requirements of OHS, industry, fair trading, trade practices, sales of goods and public liability legislation
- crop seeds requirements of local customers
- basic crop cultivation techniques
- fertilisers
- climate and growing conditions generally
- relevant components of State/Territory Acts relating to fertilisers and certified seeds
- basic plant disorders.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate using a range of interpersonal skills, including questioning and affective listening skills
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess and demonstrate cost benefits
- research supplier information
- safely lift, carry and handle products
- identify basic plant disorders.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3809A**Unit Descriptor****Provide advice on hardware products**

This competency standard covers the process of providing advice on hardware products. Information may need to be provided on building products, and irrigation and stock water supply systems.

It requires the application of knowledge and skills to interact with, engage and understand customer requirements, as well as the ability to provide appropriate advice to customers on the use and suitability of products, and on alternative and additional products. The work in this standard will be carried out with limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs . 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3 Available products are matched to customer needs. 1.4 Knowledge and understanding of hardware products is actively and regularly researched and updated from authoritative sources .
2. Provide product advice	2.1 Advice that addresses customer needs is provided to customers in a timely and professional manner . 2.2 Products that may meet customer needs are appropriately exhibited to customer. 2.3 Alternative and additional products and services are suggested as necessary. 2.4 Customers concerns and questions are addressed sensitively in line with enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Advice and information about customer requirements and products may be discussed with customers, suppliers, and other appropriate personnel. Technical information regarding products needs to be conveyed to customers in a manner that ensures the customer understands the products application and related information.	2
Collecting analysing and organising information	Customer requirements may need to be processed. Information with regard to products may be researched and recorded.	1
Planning and organising activities	Provision of advice may need to be structured and product application thought through to ensure all components are accounted for, and product is correct for application.	1
Working with others and in teams	Consultation with other members of the work team to decide on best fit for application, and to ensure customer satisfaction.	1
Using mathematical ideas and techniques	Mathematical techniques may be applied in the measurement of quantities to meet purchase or job requirements, calculation of volumes, and the pricing of stock supplies.	2
Solving problems	Problems relating to matching customer requirements to correct product and in helping customer to understand technical information.	2
Using technology	In calculating volumes and quantities needed to meet customers needs, and in accessing information about the product.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What interpersonal skills might be considered appropriate when identifying customer needs?	Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, seeking feedback from the customer to confirm understanding of needs, questioning to clarify and confirm the customers needs, listening and responding appropriately to what the client is communicating, using appropriate tone, having regard for manner, and personal space considerations. It may include checking with client to determine budget considerations, exact requirements, and the proposed product usage and environment/conditions in which product will be used.
What customer needs might be identified?	These could include the specific needs of customer depending on job requirements and specifications. They may also relate to the need for specialised or technical assistance and the intended use of product and environment in which product is to be used.
What enterprise procedures might need to be considered?	"Meet and greet" procedures for customers including timing and nature of approach, store policy and procedures on customer service and sales, promoting products and encouraging sales. Enterprise policy might include "hard, suggestive or soft sell" techniques.
What products might be assessed against customer requirements?	Building products including timber, cement, colorbond, galvanised, zincalume, fibrous cement cladding, and roofing materials. Insulation and damp-proofing materials, pre-fabricated buildings and hardware including screws nails, fixings, locks, hinges, catches and bolts.
What products might be assessed against customer requirements?	Irrigation and reticulation systems, pumps and ancillary equipment, urban irrigation systems, and associated spare parts.
What authoritative sources might be accessed?	Specialist advice from manufacturer/supplier or technical expert within enterprise or attached to manufacturer/supplier may be sought. Journals, books, catalogues, databases and audio-visual materials might also be accessed.

What advice might customers require?

Advice may include the identification of the most suitable products and materials for the application, quantities, durability and product maintenance, availability, and any rebates. The advantages, disadvantages, features, benefits and limitations of various products.

Additional advice may be written or verbal and may include identification of safety and legal considerations, advice on specialised equipment, correct usage and installation of products, material handling hazards, and personal protective equipment requirements (which may include fitting or demonstration of product).

Advice on service and maintenance requirements, warranty and customer/store responsibilities, spare parts replacement and availability could also be provided.

How might advice be provided in a timely and professional manner?

Using appropriate interpersonal skills, advice should be provided after gaining customers attention and/or permission in a manner that is readily understood by the customer and addresses their information needs.

How might products be exhibited?

Arrangements may need to be made for products to be showcased or safely exhibited. Products may also be exhibited and promoted through brochures, leaflets, video displays, company sales representatives, product information sessions, and exhibits of existing systems.

What alternative products and services might be suggested?

Alternative products and services that would also meet job/customer requirements or could be needed to complete the application, such as more durable or cost effective alternatives, or tools for construction as "add on sales".

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing advice on hardware products requires evidence that demonstrates the ability to advise customers as to the most appropriate products for their specific application/environment, and to understand customer requirements. It involves the ability to engage with and give advice to customers. It requires sufficient communication skills to ensure that advice on the type of product, its suitability and application is understood by the customer. The ability to organise the demonstration of products, provide additional advice, encourage add on sales, and to represent the enterprise in a professional manner when dealing with customers is also required.

The skills and knowledge required to provide advice on hardware products must be transferable to a different work environment. For example, if competence is demonstrated in providing advice on building products, it must also be evident in providing information on irrigation products in a small, medium or large enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- customer service and selling techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant requirements of OHS, industry, fair trading, trade practices, sales of goods and public liability legislation.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate using a range of interpersonal skills, including questioning and attentive listening skills
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess and demonstrate cost benefits
- research supplier information
- safely lift, carry and handle products.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

**Essential Assessment
Information**

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3810A**Unit Descriptor****Provide advice on livestock products**

This competency standard covers the process of providing advice on livestock products. Information may need to be provided on livestock industry equipment, animal handling systems and stockfeeds.

It requires the application of knowledge and skills to interact with, engage and understand customer requirements, as well as the ability to provide appropriate advice to customers on the use and suitability of products, and on alternative and additional products.

The work in this standard will be carried out with limited supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Identify customer needs	1.1 Appropriate interpersonal skills are used to accurately identify customer needs . 1.2 Customer enquiries are handled courteously and promptly in accordance with enterprise procedures and industry requirements. 1.3 Available products are matched to customer needs. 1.4 Knowledge and understanding of livestock products is actively and regularly researched and updated from authoritative sources .
2. Provide product advice	2.1 Advice that addresses customer needs is provided to customers in a timely and professional manner . 2.2 Products that may meet customer needs are appropriately exhibited to customer. 2.3 Alternative and additional products and services are suggested as necessary. 2.4 Customers concerns and questions are addressed sensitively in line with enterprise requirements.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Advice and information about customer requirements and products may be discussed with customers, suppliers, and other appropriate personnel. Technical information regarding products needs to be conveyed to customers in a manner that ensures the customer understands the products application and related information.	2
Collecting analysing and organising information	Customer requirements may need to be processed. Information with regard to products may be researched and recorded.	1
Planning and organising activities	Provision of advice may need to be structured and product application thought through to ensure all components are accounted for, and product is correct for application.	1
Working with others and in teams	Consultation with other members of the work team to decide on best fit for application, and to ensure customer satisfaction.	1
Using mathematical ideas and techniques	Mathematical techniques may be applied in the measurement of quantities to meet purchase or job requirements, calculation of volumes, and the pricing of stock supplies.	2
Solving problems	Problems relating to matching customer requirements to correct product, and in helping customer to understand technical information.	2
Using technology	In calculating volumes and quantities needed to meet customers needs, and in accessing information about the product.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What interpersonal skills might be considered appropriate when identifying customer needs?

Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, questioning to clarify and confirm the customer's needs, listening and responding appropriately to what the client is communicating, and using appropriate tone, having regard for manner, and personal space considerations.

It may include checking with client to determine: budget considerations, exact requirements, and proposed product usage and environment/conditions in which product will be used.

What customer needs might be identified?

These could include the specific needs of customers depending on job requirements and specifications. They may also relate to the need for specialised or technical assistance, and the intended use of product and environment in which product is to be used.

What enterprise procedures might need to be considered?

"Meet and greet" procedures for customers including timing and nature of approach, store policy and procedures on customer service and sales, promoting products, and encouraging sales. Enterprise policy might include "hard, suggestive or soft sell" techniques.

What products might be assessed against customer requirements?

Animal restraint systems such as: Stock pens, portable yards, crushes, electric fencing systems (mains, battery and solar), wire strand systems, wire mesh systems, post and rail for a variety of animals including cattle, deer, sheep, ostrich/emus, goats, pigs, llamas/alpacas, domestic animals, and feral animals.

Dairy industry products for: Milking systems, milk processing equipment, calf feeding, and handling equipment. Marking and tagging products, calving assistance products, and cow and calf health products.

Horse industry products for: Stock and draft work, racing, hobby and recreational purposes, show events, and competitive equestrian events could include equipment such as saddles, shoeing equipment, clippers, accessories, horse transport-trailers, and specialised racing equipment.

Stockfeed requirements: Standard animal feeds including hay, legumes, wheat and grains, brassicas, crop residues, chaff, and prepared animals. Prepared animal feeds such as silage, grain mixes, pellets, supplements (vitamins, minerals), crumbles, meals, and cubes. Diet supplements including injectable and oral vitamin supplements, and basic medications.

What authoritative sources might be accessed?

Specialist advice from manufacturer/supplier or technical expert within enterprise or attached to manufacturer/supplier may be sought.

Journals, books, catalogues, databases and audio-visual materials might also be accessed.

What advice might customers require?

Advice may cover the identification of the most suitable product and materials for the application, quantities, durability and product maintenance, availability, and any rebates for quantity purchased. The advantages, disadvantages, features, benefits and limitations of various products.

Additional advice may be written or verbal and include identification of safety and legal considerations in use and sales of products, advice on specialised equipment, animal health and nutritional performance products; correct usage and installation, handling hazards; and personal protective equipment requirements (which may include fitting or demonstration of product). Advice on service and maintenance requirements, warranty and customer/store responsibilities, spare parts replacement and availability could also be provided.

In particular, for animal restraint systems additional advice may include explanation of alternative fencing, yard, gates and gate accessories, crush and fencing options, hazards of mains powered electric restraints, advantages and disadvantages of different hand and power tools, and mechanical post driving or boring systems.

How might advice be provided in a timely and professional manner?

Using appropriate interpersonal skills, advice should be provided after gaining customers attention and/or permission in a manner that is readily understood by the customer and addresses their information needs.

How might products be exhibited?

Arrangements may need to be made for products to be showcased or safely exhibited. Products may also be promoted through brochures, leaflets, video displays, company sales representatives, product information sessions, and exhibits of existing systems.

What alternative products and services might be suggested?

Alternative, additional and specialist products and services as "add on sales" that would meet identified need and customer requirements, or could be needed to complete the application. These could include more suitable/durable or cost effective alternatives from a range of products, supplementary or specialist products, or health, dietary and feed supplements. Personal protective equipment.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this unit requires evidence that demonstrates the ability to advise customers as to the most appropriate products for their specific application/environment, and to understand customer requirements. It involves the ability to engage with and give advice to customers. It requires sufficient communication skills to ensure that advice on product type, its suitability and application is understood by the customer. The ability to organise the demonstration of products, provide additional advice, encourage add on sales, and to represent the enterprise in a professional manner when dealing with customers is also required.

The skills and knowledge required to provide advice on livestock products must be transferable to a different work environment. For example, if competence is demonstrated in providing advice on dairy industry equipment, it must also be evident in providing information on stockfeeds and/or horse industry equipment in a small, medium or large enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- customer service and selling techniques
- systems and procedures for the safe handling of products
- enterprises business values, structure, products and services
- industry terminology for products
- requirements of local or specific customers
- relevant OHS, industry (e.g. racing/harness racing), fair trading, trade practices, and sales of goods legislation
- relevant components of State/Territory Acts relating to fertilisers and certified seeds.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- communicate using a range of interpersonal skills, including questioning and attentive listening skills
- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- assess and demonstrate cost benefits
- research supplier information
- safely lift, carry and handle products.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3819A**Unit Descriptor****Process customer complaints**

This competency standard covers the skills and knowledge required to handle negative feedback/complaints from customers, whether formal or informal. It would typically apply to that part of a persons role where he/she has responsibility for, or may be more concerned with the processing of customer service complaints. The work in this standard will be carried out with limited supervision within enterprise guidelines.

This unit of competency is GCST03A from the Customer Service Generic Guideline Competencies. It has been customised for the Rural Production and Horticultural industries.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Respond to customer complaints	1.1 Complaints are processed in accordance with organisational policies and procedures established under legislation, regulations or codes of practice. 1.2 Necessary reports relating to the complaints are obtained, documented and reviewed. 1.3 Decisions are made, taking into account applicable law, company policies and codes. 1.4 Resolution of the complaint is negotiated and agreed where possible. 1.5 A register of complaints/disputes is maintained. 1.6 Customer is informed of outcome of investigation.
2. Refer complaints	2.1 Complaints that require referral to other personnel or external bodies are identified. 2.2 Referrals are made to appropriate personnel for follow up in accordance with individual level of responsibility. 2.3 All documents and investigation reports are forwarded. 2.4 Appropriate personnel are followed up to gain prompt decisions.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By discussing the customers concerns and issues.	2
Collecting analysing and organising information	By recording the nature of the complaint in accordance with enterprise requirements.	2
Planning and organising activities	Complaint resolution processes followed to negotiate a resolution.	2
Working with others and in teams	Referring complaint to another staff member or relevant body.	1
Using mathematical ideas and techniques	By calculating price reductions and refunds.	1
Solving problems	By seeking to negotiate an outcome satisfactory to all parties.	2
Using technology	Processes and complaints may be filed electronically	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

Who may be a customer?	Customers may be either internal or external, and may include but are not limited to, customers with routine or special requests, regular and new customers, people from a range of social, cultural or ethnic backgrounds, or people with varying physical and mental abilities.
What types of complaint may be made?	Types of complaints may range from simple customer dissatisfaction that can be resolved on the spot, to scenarios where external bodies such as police are required. Examples of complaints may include: product quality or misunderstanding of its purpose, service dissatisfaction, price or quantity errors, delivery issues, manufacturers warranty, or service.
What may be included in organisational policy and procedures?	Complaints procedures, organisational standard report forms, job descriptions, code of ethics, staff appearance and presentation, and quality systems, standards and guidelines.

What legislation, regulations and codes of practice may be relevant?	Consumer law, environmental law, OHS, discrimination/equal employment opportunity, harassment and other laws specific to local government, State and Federal legislation, privacy legislation, resolution of complaints, and codes of conduct.
What form may documentation take?	Written, e.g. forms and reports, audio-visual, e.g. tapes and computer based systems.
What types of referrals may be made?	Supervisor, manufacturer/supplier or technical expert within enterprise, external bodies, e.g. ombudsman, consumer affairs, or ICAC, police.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in processing customer complaints requires evidence of the ability to identify the need(s) required by the customer and to process the complaint to standard and in an appropriate time frame, or recommend appropriate action arising from the complaint.

The skills and knowledge required to process customer complaints must be transferable to a different work environment. For example, competency may be demonstrated in either an agricultural or horticultural merchandise setting. These settings could be urban and/or rural work environments in small, medium or large multi purpose or specialist businesses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- State/Territory/Commonwealth legislation, regulations, industry codes of practice, standards and guidelines
- organisational policy and procedures for dealing with complaints
- the importance of customer complaints
- the importance of good communication
- the individuals role in processing customer complaints.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- the ability to apply organisational and/or industry procedures to a range of situations, and to exercise judgement in this application, along with an ability to facilitate other people to undertake appropriate customer service
- active listening
- using open and/or closed questions
- speaking clearly and concisely
- using appropriate language and tone of voice
- giving customers full attention
- maintaining eye-contact (for face-to-face interactions)
- non-verbal communication, e.g. body language, personal presentation (for face-to-face interactions)
- negotiation techniques
- clear, legible writing/language skills which allow for adequate communication with required people
- literacy skills to the level required to process complaints
- numeracy skills to the level required to interpret the customer complaints and take required actions.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3901A**Comply with industry quality assurance requirements****Unit Descriptor**

This competency standard covers the process of complying with industry quality assurance requirements in the production of meat, milk or eggs. It requires the ability to implement quality assurance practices on food safety, quality, and animal welfare, biosecurity, implement standard operating procedures, and report problems that affect quality. Complying with industry quality assurance requirements requires knowledge of industry quality assurance requirements, animal production processes, Hazard Analysis Critical Control Point (HACCP) approach to quality assurance, and enterprise policies, guidelines and standard operating procedures relating to food safety, quality and animal welfare.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Implement quality assurance practices on food safety and quality, biosecurity and animal welfare	1.1 Elements of the industry quality assurance requirements are determined. 1.2 Hazards to food safety and quality are identified for work area according to enterprise guidelines and standard operating procedures. 1.3 Critical control points for work area are determined according to workplace procedures. 1.4 Record keeping is completed according to industry QA requirements.
2. Implement standard operating procedures	2.1 Standard operating procedures are implemented in accordance with enterprise requirements. 2.2 Non-conforming or defective product reported to supervisor according to enterprise/industry requirements. 2.3 Corrective action taken in accordance with enterprise policy and procedures .
3. Report problems that affect quality	3.1 Recognise potential or existing quality problems. 3.2 Identify instances of variation in quality from specifications or work instructions. 3.3 Report variation and potential problems to supervisor/manager according to enterprise guidelines.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	Through record keeping and reporting to management as required.	2
Collecting analysing and organising information	Through complying with standard operating procedures and work instructions.	2
Planning and organising activities	According to HACCP approaches to quality assurance.	2
Working with others and in teams	Through teamwork in implementation of the QA system.	2
Using mathematical ideas and techniques	Through recording of data according to SOPs.	1
Solving problems	Through recognising variation and non-compliances, and undertaking corrective work and/or reporting to supervisors.	2
Using technology	Through use of computers and communication systems.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What food is covered by this standard? Meat, milk and eggs.

What are elements of the QA system should be considered? These include Hazard Analysis Critical Control Point (HACCP) charts, mission statement, work instructions, corrective action and monitoring procedures, standard operating procedures, enterprise and industry policies and codes of practice.

What hazards may be relevant to this competency standard?

These may include:

- Physical hazards where foreign objects such as retained, broken needles, welding rods, nails or wire are present in animals.
- Chemical hazards resulting from residues such as antibiotics, pesticides, alkaloids and other substances used in animal production.
- Biological hazards where contamination from other animals (e.g. mice, rats, cats), poor housing/transport conditions, and dirty water affects animal health and food quality.
- Food quality hazards resulting from poor handling of animals, unhealthy or diseased animals, inappropriate use of dogs, extreme weather conditions, poor loading and transport conditions, and time off feed.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in complying with industry quality assurance requirements requires evidence that industry quality assurance requirements have been successfully understood and complied with in an animal production enterprise. The skills and knowledge required to comply with industry quality assurance requirements must be transferable to a range of work environments and contexts. For example, this could include different animals, production systems, and industry QA requirements.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- industry QA requirements, such as the Australian Pig Industry Quality Program (APIQ)
- animal production processes
- HACCP (Hazard Analysis Critical Control Point) approach to quality assurance
- enterprise policies, guidelines and standard operating procedures (SOP's) relating to food safety quality, biosecurity, and animal welfare.
- enterprise OHS requirements
- animal health and welfare.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- implement quality assurance practices on food safety and quality, biosecurity and animal welfare
- implement standard operating procedures
- report problems that affect quality.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3902A

Unit Descriptor

Document a wool clip

This competency standard covers the process of documenting a wool clip to national and organisational standards. It includes instructing others in the use of the system, maintaining the records, and advising the owner/manager of issues where appropriate.

Documenting a wool clip is likely to be under limited supervision from others, with checking only related to overall progress. Documenting a wool clip is normally done within routines, methods and procedures where some discretion and judgement is required in the selection of equipment and materials, organisation of work, services, actions and the achievement of outcomes within time constraints.

The documentation of a wool clip contributes to the wool harvesting operation by optimising efficiency for the grower.

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Establish recording system and documentation	1.1 The nature of documentation is selected according to the culture and facilities of the wool shed. 1.2 Guidelines for the use of the recording system are established, including the type, frequency and format of recording. 1.3 Those who are to use the recording system are clearly informed of their obligations and any specific instructions that are necessary. 1.4 Checks are made regularly to ensure that documentation is accurately completed and updated at the proper times.
2. Complete records for wool classing	2.1 Documents and records required by the organisation and the market are completed clearly and accurately. 2.2 The wool clip specification is completed prior to consignment, to ensure that the correct lotting advice is provided to the selling broker or buyer. 2.3 Any additional notes or advice necessary on the documents are made clearly and accurately. 2.4 All signatures and/or registrations that are required are obtained and included on documentation. 2.5 Wages statements for contractors are prepared according to the agreements reached in employment conditions.
3. Provide information and advice to the woolgrower	3.1 Suggestions for improved safety, conditions and fleece quality are derived from observations, smoothness of workflow, and discussions with operators within the wool shed. 3.2 The wool clips specification is communicated to the appropriate authority at shed cutout.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In documenting wool clip specifications.	2
Collecting analysing and organising information	In collecting and describing clip characteristics.	2
Planning and organising activities	In planning for and sequencing the completion of all tasks associated with preparing a wool book and wage statement.	2
Working with others and in teams	In working with the range of people in the wool shed who include shed hands, shearers and wool classers.	2
Using mathematical ideas and techniques	In calculating bale weights, bale numbers, and wages.	1
Solving problems	In identifying improvements to the wool documentation process.	2
Using technology	In operating communication technology, calculating equipment, and measuring equipment.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What form might the documentation take?	It may be manual or digital, and could be the use of a wool book or other recording device.
What might be covered in the guidelines for the recording system?	They might cover the type, frequency and format of recording, and a description of what details need to be recorded. These could be bale numbers, bale descriptions, bale weights, contents of mixed bales, flock breaks, mob descriptions, mob averages, or lotting order.
What documents and records will be required?	Advice notes, waybills, classers specification, wool clip specification, and/or wool classers wages statement. Documents may be provided in paper-based or by email format.

What signatures and/or registrations may be required?	The classers specification needs the signature of the owner and the classer.
Which contractors will the wages statements be prepared for?	Any contractors whose work records are kept in the wool room. These might include wool classers, shed hands, pressers, and shearers.
What might the suggestions for improvements include?	Flock presentation, shed layout, clip preparation, work flow, changes to the way tools are used or machinery set up, or the use of digital technologies.
What OHS requirements may be applicable to this standard?	Safe systems and procedures for: • the operation and maintenance of hazard-free facilities and equipment • safe manual handling, including lifting and carrying • protection from electrical hazards, hazardous noise and organic and other dusts • appropriate use of personal protective equipment and clothing. Consideration of OHS issues for this standard may also include consideration of any national codes of practice in the industry.
What personal protective equipment may be required?	Boots, overalls, protective eyewear, hearing protection, respirator or face mask.
Who would be the appropriate authority to receive advice?	Whoever has responsibility at the time for the operations - the owner, grower, manager, broker or agent.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in documenting a wool clip requires evidence that all relevant details are recorded accurately and clearly in a timely manner.

The skills and knowledge required to document a wool clip must be transferable to a different work environment. For example, across a range of shed and fleece types.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- quality assurance schemes used in the organisation and in the industry, and their documentation requirements
- correct clip specification
- employment conditions and agreements for a range of workers
- relevant national codes of practice for the industry.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- develop the recording system for wool clips and bales
- communicate recording requirements clearly to wool classers and pressers
- observe the work and identify area of the work or the facilities that could be improved
- calculate and prepare wages statements
- observe, identify and react appropriately to OHS hazards.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3904A**Keep records for a primary production business****Unit Descriptor**

This competency standard covers the process of creating and maintaining physical records, preparing and processing basic financial transactions, establishing and maintaining a cashbook, and reconciling and preparing invoices within primary production businesses. Both the physical and financial records of the business are vital for use by management for planning purposes, meeting legislative requirements, and the efficient operation of the business on a daily basis.

Work performed at this level requires a full range of well-developed skills where some discretion and judgement is required. One will take responsibility for own outputs and limited responsibility for the output of others.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare and store physical records

- 1.1 Physical records and inventories required for the organisation are determined in consultation with the **management team**.
- 1.2 **Methods for collecting information** are reliable, and time and resources are used efficiently.
- 1.3 Appropriate **interpersonal skills** are used to access relevant information from individuals and teams.
- 1.4 Information is organised into a **format** suitable for analysis, interpretation and dissemination in accordance with organisational requirements.
- 1.5 **Business equipment/technology** is used to maintain information in accordance with organisational and OHS requirements.
- 1.6 Records are updated and stored in accordance with organisational requirements.

2. Process petty cash transactions

- 2.1 Petty cash claims and vouchers are **checked for accuracy and authenticity** prior to processing.
- 2.2 Petty cash transactions are processed and recorded in accordance with organisational requirements.
- 2.3 Petty cash book balanced in accordance with organisational requirements.

3. Establish and maintain a cash book in accordance with organisational requirements

- 3.1 Cash receipts and payments book created, and **documentation** relating to financial **transactions checked for validity** prior to processing.
- 3.2 Cashbook balances reconciled with bank and creditor statements.
- 3.3 Cashbook balances are used to complete **legislative reporting requirements**.
- 3.4 **Cash flow statements** are prepared on the basis of summarised cashbook entries.

4. Reconcile invoices for payment to creditors	4.1 Adjustments and errors are identified, reported and rectified in accordance with organisational requirements. 4.2 Invoices processed and payment made in accordance with organisational requirements.
5. Prepare invoices for debtors	5.1 Invoices are prepared accurately and, if required, distributed to nominated person for verification prior to despatch. 5.2 Adjustments are made as required in accordance with organisational requirements. 5.3 Invoices and other related documents copied and filed in accordance with organisational requirements for taxation and auditing purposes.

KEY COMPETENCIES

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By research and discussion with the management team, employees and outside organisations.	2
Collecting analysing and organising information	By collecting and presenting information from a variety of sources and organising it into records, graphs, charts and tables.	2
Planning and organising activities	By capturing and storing data generated within the business on a regular basis.	2
Working with others and in teams	By working with business employees and the management team to assist in providing information on particular aspects of the business.	2
Using mathematical ideas and techniques	By the processing of financial transactions and the development of cash flow statements and budgets.	2
Solving problems	Information that is contradictory, inconsistent, ambiguous or incomplete can be rejected.	2
Using technology	By using technology to research information, keep records and perform calculations.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What sort of things will be recorded in physical records?

Records may include a property plan, livestock, paddock treatments including spraying, paddocks, rainfall, production, sales data, supplies, machinery and equipment, and stock.

Who might be members of the management team?	They may be oneself, family members, fellow managers, employees, professional advisors, partners, and mentors.
What methods for collecting information might be used?	Methods for collecting information may include observation and listening, previous file records, individual research, statistics and reports from other organizations, producing reports from data collected on the farm, translating data from diaries and note-books, or professional data collection agency.
What type of interpersonal skills may be required?	Methods for collecting information may include observation and listening, previous file records, individual research, statistics and reports from other organizations, producing reports from data collected on the farm, translating data from diaries and note-books, or professional data collection agency.
What type of format might be relevant?	Format for records and inventories could include maps, graphs, charts, cards, electronic, databases, diaries, or notebooks.
What sort of business equipment/technology might be used?	Business equipment and technology that might be used include computer, software, Internet, email, calculator, fax or phone.
What type of checking for accuracy and authenticity might be used?	Checking may include correct information on voucher, receipt of purchase, and ensuring items are business related.
What is meant by a cashbook?	A cashbook documents the daily receipts and payments of the business. It may be created and maintained manually and/or electronically.
What sort of documentation requires checking for validity in this context?	Documentation may include cheques, taxation invoices, accounts, and credit card vouchers. Validity may include checking date, signature, details on cheque are correct, expiry date of credit cards, information on taxation invoice, and accounts are accurate.
What sort of legislative reporting requirements would be included?	Legislative reporting requirements may include recording Australian Business Number (ABN), business activity statements (BAS), instalment activity statements (AIS), PAYG withholding, superannuation, taxation, or work cover.
What is meant by cash flow statements in this context?	Legislative reporting requirements may include recording Australian Business Number (ABN), business activity statements (BAS), instalment activity statements (AIS), PAYG withholding, superannuation, taxation, or work cover.

Who might be creditors and debtors?	Creditors and debtors may include financial institutions, goods and service suppliers, rural merchants, contractors, professional advisors, and co-operatives.
What sort of taxation and auditing requirements may be required?	Taxation and auditing requirements would include accurate records of all business assets, liabilities, income, expenses and entitlements to be analysed by an accountant for compliance purposes.
What type of financial transactions might the business undertake?	Financial transactions may include purchasing and selling products, machinery and equipment, vehicles and supplies, banking cheques, paying invoices and bills, or transferring funds electronically.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in record keeping in rural businesses requires evidence that both physical and financial records for the business can be created, maintained and stored in accordance with legislative and organisational requirements. Financial transactions involving cash, electronic funds transfer, cheques and invoices must be processed and recorded accurately in accordance with legislative and organisational requirements.

The skills and knowledge required to keep records in a rural business must be transferable to a different work environment. For example, across a wide range of small, medium and large agricultural and horticultural businesses.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- nature of the business and its legal and organisational structure
- relevant National, State and local government legislative requirements, especially in regard to OHS and environmental requirements
- organisational policies and procedures relating to the distribution of workplace information, legal and ethical obligations
- methods to identify sources of information
- procedures to analyse information to identify patterns and trends
- the organisations record keeping/filing systems, security of information and safe record keeping procedures
- principles of effective interpersonal communication
- principles and procedures for cash and non cash handling
- principles of single entry accounting, and cash flow statements.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- collect and record accurate and reliable information
- present data in a format suitable for the organisations requirements
- use business equipment and technology correctly and safely
- file records accurately in accordance with organisational requirements
- perform calculations and balance accounts
- prepare cash flow statements and budgets
- reconcile creditors invoices and prepare debtors invoices
- process forms and other documentation.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3905A**Unit Descriptor****Sell products and services**

This competency standard covers the process of selling products and services.

It requires the application of knowledge and skills to interact with customers, identify customer needs, to seek advice from appropriate personnel as necessary, and to complete sales. The work in this standard will be carried out under supervision within enterprise guidelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Engage customer	1.1 Customer is approached in a timely and professional manner and in line with enterprise procedures. 1.2 Appropriate interpersonal skills are used to engage customer. 1.3 Customers are presented with purchase options that address their needs, and assisted to identify their preferred option. 1.4 Personal and professional limitations in addressing customer needs are identified, and assistance is sought from appropriate personnel when required.
2. Sell products and services	2.1 Prices and quotations are determined on the advice of appropriate personnel and provided to customer. 2.2 Sales are completed in accordance with enterprise requirements and to maximise potential for customer satisfaction. 2.3 Opportunities for "add-on" and repeat sales are identified and responded to in line with enterprise procedures.
3. Maintain products	3.1 Products are handled and stored safely and efficiently in line with manufacturer, enterprise and OHS guidelines. 3.2 Documentation and re-ordering are completed in line with enterprise requirements. 3.3 Own sales techniques are reviewed to enhance future sales results.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In discussing customer needs and benefits of products with customers and/or appropriate personnel.	1
Collecting analysing and organising information	In relation to products and sales and in determining the requirements of customers.	1
Planning and organising activities	In engaging customer, matching products to customer needs, organising quotations, and in seeking assistance.	1
Working with others and in teams	By referring customers to more appropriate personnel, and in seeking assistance from other members of the work team.	1
Using mathematical ideas and techniques	In calculating quantities and prices.	1
Solving problems	In seeking assistance with information outside of area of own knowledge or area of responsibility, and in matching products to customer needs.	1
Using technology	In calculating volumes and prices, and recording stock movement.	1

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

How might information be provided in a timely and professional manner?

Through using appropriate interpersonal skills, providing information after gaining customers attention and/or permission, and in a manner that is readily understood by the customer and addresses their information needs.

What enterprise procedures might need to be considered?

"Meet and greet" procedures for customers include timing and nature of approach, store policy and procedures on customer service and sales, promoting products, and encouraging sales. Enterprise policy in relation to "hard, suggestive or soft sell" techniques.

What interpersonal skills might be considered appropriate when identifying customer needs?

Skills may include using appropriate body language, summarising and paraphrasing to check understanding of customers message, providing an opportunity for the customer to confirm their request, and seeking feedback from the customer to confirm understanding of needs. Questioning to clarify and confirm the customers needs, listening and responding appropriately to what the client is communicating, using appropriate tone, and having regard for manner and personal space considerations.

What personal and professional limitations might arise?

Lack of knowledge in regard to specific products and product applications, store policy and procedures, OHS, and other legal considerations.

Lack of skills in handling difficult customers, making or closing a sale, or providing advice.

What are the important considerations in giving prices and quotations?

Quotations may be written or verbal and should be consistent with customer requirements and enterprise policy. Quotations may be completed or checked by a supervisor or more experienced staff prior to presentation to customer.

Who might be considered to be appropriate personnel?

Supervisors, more experienced sales staff and technical support within enterprise or manufacturer.

What might be included in add-on and repeat sales?

Add-on sales could include alternative, additional and specialist products and services that meet identified needs and customer requirements, or could be needed to complete or complement the application or initial purchase. For example, additional equipment, materials or accessories.

Repeat sales may include opportunities to encourage further business at a later date and to promote further contact with the store/business, including customer receiving brochures and notices of sales promotions.

What are the important considerations in handling and storing products safely and efficiently?

Products need to be stored safely and securely, and to provide maximum protection and longevity of product.

What documentation might need to be completed?

Quantity and code slips for register staff, clearance slips, order forms and consignment documents may be required.

What re-ordering procedures might be necessary?

Recording of sales and completion of stock control/movement records.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this unit requires evidence that demonstrates the ability to engage customers, identify the potential for a sale, and present purchase options to the customer. It requires skills in providing quotations (with assistance when required), and in completing a sale. The ability to encourage further business, to know when to refer or seek assistance, and to know own limitations is also required.

The skills and knowledge required to sell products and services must be transferable to a different work environment. For example, if competency is demonstrated in selling products and services in an agricultural merchandise setting, it should also be evident in a horticultural setting in a small, medium or large enterprise environment.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- customer buying signals
- customer requirements in various rural and horticultural settings
- how to effectively engage and communicate with a range of customers from culturally diverse backgrounds, and of varying physical and mental abilities
- legal requirements in sales environments, particularly Fair Trading, Trade Practices and Sale of Goods legislation, and public liability
- sales techniques.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- assess initial customer needs
- calculate quantities and prices
- access and research product information
- seek assistance as required
- recommend products
- encourage repeat business
- complete sales
- communicate effectively with customers from a range of culturally diverse backgrounds.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3907A**Unit Descriptor****Use hand held e-business tools**

This competency standard covers the use of hand held tools for e-business. With the increasing use of information and communication technologies, the tools available to enhance business practices have expanded.

This unit requires the application of knowledge and skills to use hand held business tools that apply information and communications technologies to the workplace.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Prepare hand held e-business tools for use	1.1 E-business tools are selected according to requirements of the task and business practices. 1.2 Relevant start up procedures are completed in accordance with technical and business requirements. 1.3 Tools are configured with relevant business data as required. 1.4 Connectivity is tested, as required, according to technical and business requirements.
2. Use hand held e-business tools	2.1 E-business tools are used according to technical and business requirements. 2.2 Equipment faults are addressed, as required, according to technical and business requirements. 2.3 Data is checked for accuracy and errors are addressed, as required, according to technical and business requirements.
3. Process business data	3.1 Business data is generated and compiled, as required, with reference to technical and business requirements. 3.2 Business data is processed according to technical and business requirements. 3.3 Performance of hand held e-business tools is reviewed and recommendations made for improvements to hardware, software and/or their use in accordance with e-business strategy and budget.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	By communicating with management, operators and others in the workplace.	2
Collecting analysing and organising information	By observing the performance of the hand held tool and analysing the usefulness of the data.	2
Planning and organising activities	In ensuring that the tools are applied to the task as required by production timelines.	2
Working with others and in teams	In working safely to ensure that the tools are used effectively and the data is processed as required.	2
Using mathematical ideas and techniques	In calculating and recording production data.	2
Solving problems	Through identifying solutions to production processes that relate to the existing use of hand held business tools.	2
Using technology	By ensuring that the hand held e-business tools are used according to technical and business requirements.	2

RANGE STATEMENT

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What forms of e-business might relate to this standard?

Every type of business transaction in which the participants (i.e., suppliers, end users, etc.) prepare or transact business, or conduct their trade in goods or services electronically (Definition of e-commerce in *E-competent Australia*, ANTA, May 2000). Some e-business supply chains however, may only involve electronic data related to products, e.g. consignment data relating to product type, price, etc.; details of individual animals captured by RF, or microchip scanners.

What types of hand held e-business tools might apply to this unit?

Different industry sectors use different hand held e-business tools that may utilise wired or wireless technologies. Examples include Global Positioning Systems (GPS); Personal Data Assistants (PDAs) e.g. Palm; Radio Frequency (RF) scanners; microchip scanners, mobile phone enabled email and Short Message Service (SMS).

What business data might be relevant?

Business data will depend on the business process involved, and will vary depending on the industry sector and the elements of production to which the tools will be applied. Relevant business processes might include recording application of chemicals; recording crop details; recording individual livestock data from microchips; recording consignment data for bar-coded wool bales; accessing up to date weather information; and general data entry.

What information and development support might be relevant to this unit?

The use of hand held e-business tools will often require some form of process re-engineering where aspects of production and administration are changed to meet new business requirements. The changes will vary depending on the industry sector, the elements of production involved, and the state of readiness of the enterprise. Implementation might thus require:

- advice on technology issues/compatibility
- protocols for electronic data interchange
- personal identification and password for online access between businesses for access to inventory data and purchasing, payment or supply processes
- banking information for electronic funds transfer
- protocols relating to legal or security issues for e-business.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in participating in using hand held e-business tools requires evidence that the tools are used to ensure that the relevant production data is processed in according to technical and business requirements.

The skills and knowledge required to use hand held e-business tools must be transferable to a different work environment. For example, as different supply chains exist across a range of industry sectors, the nature of workplace practices and procedures will vary according to the extent to which electronic forms of data are used.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- operating procedures of relevant business tools
- relevant protocols for electronic data interchange
- personal identification and password for online access between businesses for access to inventory data and purchasing, payment or supply processes.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- use relevant technology such as computers, handheld scanners, and barcoding equipment
- generate data in the format required by the e-business supply chain.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

RTE3908A**Unit Descriptor****Maintain and monitor feed stocks**

This competency standard covers the process of maintaining required quantities and quality of livestock feed stocks. It includes conducting a stocktake, placing orders with suppliers, and ensuring that storage areas and containers are maintained in a clean, pest-free condition.

Overall progress may be checked periodically. The maintenance and monitoring of feed stocks will usually follow set routines, methods and procedures. Some discretion and judgement is required in the selection of equipment, materials and organisation of work. The outcomes should be achieved within specified timelines.

Unit Sector

No sector assigned

ELEMENT**PERFORMANCE CRITERIA**

1. Determine quantities of stockfeed required	1.1 Stocktake of stockfeed is undertaken and inventory updated. 1.2 Livestock feed plans are checked and quantities required are compared with quantities in stock.
2. Place orders with suppliers	2.1 Orders for stockfeed are placed with suppliers. 2.2 Orders specify quantity, quality, delivery date, delivery site and any special instructions .
3. Receive feed into store	3.1 Delivery manifest is checked and discrepancies reported to supplier and supervisor. 3.2 Quality of stockfeed is checked and problems reported to supplier and supervisor. 3.3 Stockfeed is transferred into appropriate storage containers. 3.4 Records and labels are updated and filed according to enterprise requirements.
4. Prepare and maintain feed storage area and containers	4.1 Occupational Health & Safety (OHS) hazards are identified and action taken to minimise risk. 4.2 Feed storage area and containers are cleaned according to enterprise cleaning schedule and procedures. 4.3 Stocks of stockfeed are organised according to enterprise inventory management policy . 4.4 Stockfeed is correctly labelled . 4.5 Feed storage containers are cleaned before refilling. 4.6 Feed storage area and containers are checked regularly for signs of pest infestation. 4.7 Problems with feed storage facilities are identified, resolved or reported to supervisor for resolution. 4.8 Stockfeed that does not meet quality standards are disposed of according to enterprise procedures.

KEY COMPETENCIES

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

Key Competency	Example of Application	Performance Level
Communicating ideas and information	In dealing with other workers, suppliers, delivery drivers, silo operators, weighbridge operators, and associated office personnel.	2
Collecting analysing and organising information	Collect information about feed requirements for the enterprise, plan and place orders, conduct stock takes and update inventory.	2
Planning and organising activities	Handling, loading and unloading feed ingredients. Planning when to place orders and how to store appropriately.	2
Working with others and in teams	Working with other employees to ensure correct quantities and quality of feed is available for livestock.	1
Using mathematical ideas and techniques	In calculating storage weights and volume.	2
Solving problems	By accessing information from supervisors and dealing with supply problems.	1
Using technology	In communicating, calculating and recording information on feed ingredients.	1

RANGE STATEMENT

The Range of Variables explains how this competency standard can be used. The variables chosen in training and assessment will depend on the work contexts.

What stockfeed might need to be stored?	Grains, milled and/or mixed feed, liquid feed, feed supplements.
What information should be recorded in the inventory?	Amounts of each item in stock, identification and location of silo or container holding each item, quality of stockfeed, expiry dates, supplier, quantities required on hand.
Who might be suppliers?	Suppliers may be external to the enterprise (i.e. commercial suppliers) or part of the enterprise.
What special instructions might be given?	Special instructions may include packaging requirements, advice of biosecurity/quarantine arrangements, acceptance of alternative formulations that vary from original specifications.

What Occupational Health & Safety hazards apply to this standard?	Risks may include operating and maintaining machinery and equipment including hydraulics, augers and exposed moving parts, noise, organic and other dusts, working with, transporting and storing hazardous substances (such as pesticides), using fumigants, working at heights.
What might be covered in the enterprise inventory management policy?	Storage locations and requirements of particular stockfeeds, frequency of routine stocktakes, inventory system to be used (e.g. first in first out), records required to be kept.
What information might need to be included on a label?	Specific brand and configuration of stockfeed (e.g. whether whole, milled, pelleted, powdered, liquid), date processed, date received into storage, use by date, supplier contact details, special instructions such as exposure to heat, cold, sunlight.
What might be covered by feed quality standards?	Milled and/or mixed feeds should be free from contamination, rancidity, and damp. Stockfeeds should retain their original consistency, colour, taste, texture and smell.

EVIDENCE GUIDE

What evidence is required to demonstrate competence for this standard as a whole?

Competence in maintaining and monitoring quantities and quality of feed stocks requires evidence that the feed stocks are maintained at the required levels, and that feed storage areas and containers are clean and free from pests.

The skills and knowledge required to prepare the display must be transferable to a different work environment. For example, dealing with different types of feeds and different types of rural production enterprises.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

- enterprise purchasing procedures and arrangements with suppliers
- minimum and maximum quantities required to be held in stock
- quality parameters of feed ingredients
- nutritional values of various feed ingredients and acceptable substitutes.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- assess quality of stockfeed
- undertake manual lifting safely
- read silos accurately and determine quantities in stock
- operate relevant machinery.

Are there other competency standards that could be assessed with this one?

This competency standard could be assessed on its own or in combination with other competencies relevant to the job function.

Essential Assessment Information

There is essential information about **assessing this competency standard for consistent performance and where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.



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