



Australian Government

Department of Education, Employment and Workplace Relations

FDFGR2001A Operate a liquid, mash or block stockfeed process

Revision Number: 1

FDFGR2001A Operate a liquid, mash or block stockfeed process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to set up, operate, adjust and shut down process equipment used to produce liquid, mash or block stockfeed.
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Application of the Unit

Application of the unit	This unit relates to the production of liquid, mash and block stockfeeds by a plant operator for a variety of animal species and animal production requirements. Stockfeeds can be standard products or to particular customer specification.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the equipment and process for operation	1.1. Materials are confirmed and available to meet operating requirements 1.2. Cleaning and maintenance requirements and status are identified and confirmed 1.3. Machine components and related attachments are fitted and adjusted to meet operating requirements 1.4. Processing/operating parameters are entered as required to meet safety and production requirements 1.5. Equipment performance is checked and adjusted as required 1.6. Pre-start checks are carried out as required by workplace requirements
2. Operate and monitor the liquid, mash or block feed process	2.1. The process is started and operated according to workplace procedures and occupational health and safety (OHS) requirements 2.2. Equipment is monitored to identify variation in operating conditions 2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements 2.4. The process is monitored to confirm that specifications are met 2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification 2.6. The work area is maintained according to housekeeping standards 2.7. Work is conducted in accordance with workplace environmental guidelines 2.8. Workplace records are maintained according to workplace recording requirements
3. Shut down the process	3.1. The appropriate shutdown procedure is identified 3.2. The process is shut down according to workplace procedures 3.3. Maintenance requirements are identified and reported according to workplace reporting requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- access workplace information to identify processing requirements
- select, fit and use personal protective clothing and/or equipment
- confirm supply of necessary feed, micronutrients and other additives, other required liquid ingredients and services
- conduct pre-start checks, such as inspecting equipment condition to identify any signs of wear, selecting appropriate dies and/or roll settings where required, setting processing parameters, cancelling isolation or lockouts as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational
- start, operate, monitor and adjust process equipment to achieve required outcomes, such as monitoring control points and conducting inspections as required at each stage of the mash, liquid or block to confirm process remains within specification
- monitor supply of feed and liquid to and from the mash, liquid or block production process
- take corrective action in response to out-of-specification results
- respond to and/or report equipment failure within level of responsibility
- locate emergency stop functions on equipment
- follow isolation and lock out/tag out procedures as required to take process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- demonstrate batch/product changeovers
- complete workplace records as required
- maintain work area to meet housekeeping standards
- collect samples and conduct tests according to enterprise procedures
- conduct routine maintenance according to enterprise procedures
- clean and sanitise equipment according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

Required knowledge

Knowledge of:

REQUIRED SKILLS AND KNOWLEDGE

- purpose and basic principles of each part of the process, such as volumetric metering, mixing, steam conditioning, pouring, pressing, cooling, adding and mixing in micronutrient and other additives to achieve specified proportions, sequencing of production to minimise transference and cross-contamination, and traceability procedures
- basic operating principles of equipment, such as main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- the flow of the stockfeed production process and the effect of outputs on downstream processes
- quality characteristics and uses of finished stockfeed
- effect of variation in inputs and/or services on process performance
- operating requirements and parameters and corrective action required where operation is outside specified operating parameters
- the effect on final product of variation in variables, such as:
 - oil and fat content
 - micronutrient and additive
 - consistency and appearance of mash, liquid or block feed
 - retention time and temperatures for steam conditioning, including consequences of temperatures that are too high and too low on chemical composition
 - retention time and temperature for liquid addition
- typical equipment faults and related causes, including signs and symptoms of faulty equipment and early warning signs of potential problems
- methods used to monitor the mash, liquid or block feed process, such as inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements
- common causes of variation and corrective action required
- contamination risks and related controls
- OHS hazards and controls, including the limitations of protective clothing and equipment relevant to the work process
- requirements of different shutdowns as appropriate to the process and workplace requirements, including emergency and routine shutdowns and procedures to follow in the event of a power outage
- product/process changeover procedures and responsibilities associated with process monitoring and control
- routine maintenance procedures
- cleaning and sanitation procedures
- isolation, lock out and tag out procedures and responsibilities

REQUIRED SKILLS AND KNOWLEDGE

- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the process, including waste/rework collection and handling procedures related to the process
- sampling and testing where relevant

Evidence Guide

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.

Overview of assessment

Evidence is required in the ability to operate a mash, liquid or block stockfeed production process according to OHS, quality and formulation requirements.

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- identify and interpret production and customer requirements for mash, liquid or block stockfeed
- operate and monitor production equipment to ensure consistency and quality of output
- add and mix ingredients, micronutrients and additives as required
- liaise with nutritionist and other professional and technical staff on composition requirements of stockfeed
- follow all OHS, quality and contamination avoidance procedures.

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to relevant resources. The candidate is to be assessed on knowledge and skills relevant to the mash, liquid or block stockfeed products and processes in the workplace.

Method of assessment

Evidence may include direct observation, third party report, portfolio, work documentation, response to questions, and so on that address the performance criteria and critical aspects for assessment.

Guidance information for assessment

Performance against this standard must be assessed in an industry context. For valid and reliable assessment the activity should closely replicate the work environment, circumstances and equipment likely to be encountered in a workplace.

Range Statement

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.

Legislative requirements

Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:

- the Food Safety Code, including labelling, weights and measures legislation
- legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity

Workplace information

Workplace information may include:

- standard operating procedures (SOPs)
- specifications
- production schedules and instructions
- manufacturers' advice
- standard forms and reports

Equipment

Equipment covered by this unit may include:

- feed screws and related feed transfer equipment
- steam conditioners
- pumps and holding tanks
- mixers, augers, blocks, dies and moulds
- heating and cooling equipment
- labelling machines

Liquid feed

Liquid feed includes:

- solutions and suspensions

Specifications

Specifications may include:

- pH
- recipe
- volume
- consistency
- final bag, container or block size

RANGE STATEMENT	
Stockfeed mash production process	A stockfeed mash production process typically includes: • batching and blending of components, including any micronutrients and other additives • volumetric feeding • steam conditioning • quality checking • labelling • packing and despatch
Stockfeed liquid production process	A stockfeed liquid production process typically includes: • batching and blending of components, including any micronutrients and other additives • volumetric feeding • quality checking • labelling • packing and despatch
Stockfeed block production process typically	A stockfeed block production process typically includes: • batching and blending of components, including any micronutrients and other additives • volumetric feeding • steam conditioning • pouring of stockfeed into moulds • pressing • cooling • quality checking • labelling • packing and despatch

Unit Sector(s)

Unit sector	Grain processing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		