

RTC5702A**Unit Descriptor****Develop and manage a chemical use strategy**

Develop and manage a chemical use strategy

Unit Sector

No sector assigned

ELEMENT	PERFORMANCE CRITERIA
1. Identify and evaluate need for chemical use	1.1 Integrated Pest Management (IPM) and Integrated Resistance Management (IRM) strategies are interpreted and the organisational chemical requirements are identified. 1.2 External requirements for chemical use are identified and relevant information obtained and interpreted. 1.3 Requirements for chemical use are documented. 1.4 Chemicals available to meet requirements are identified and information concerning their application is reviewed.
2. Develop a chemical use risk management strategy	2.1 Hazards in the transportation, storage and handling of chemicals are identified and assessed. 2.2 Risk factors associated with the use of chemicals are identified and documented. 2.3 Risk control measures are identified and developed in accordance with regulatory requirements. 2.4 A risk management strategy for chemical use is developed in accordance with legislation and Integrated Pest Management, Integrated Resistance Management, and Integrated Animal Health Management principles. 2.5 Appropriate insurance policies covering intended chemical use are researched and documented according to enterprise guidelines.
3. Develop and implement procedures for chemical management and use	3.1 Procedures for management and use of chemicals are developed in accordance with directions and standards. 3.2 Required precautions and risk control measures are documented. 3.3 Procedures for communicating and negotiating with the community are developed. 3.4 Information on procedures and precautions in the management and use of chemicals is distributed to relevant staff.
4. Identify training and supervision needs and solutions for chemical use in the workplace	4.1 An appropriate strategy is developed for the training, assessment and supervision of staff involved in chemical use including correct use/fit of personal protective equipment. 4.2 Suitable internal on-the-job training and monitoring of performance in the implementation of the chemical use strategy is organised and provided. 4.3 Appropriate external training and assessment in the management and use of chemicals is organised.

5. Monitor and evaluate the implementation of a chemical use strategy
- 5.1 The implementation of the established chemical use strategy is monitored in terms of regulatory requirements and established **criteria**.
 - 5.2 The effectiveness of the established chemical use strategy is evaluated.
 - 5.3 Appropriate action is initiated where there are identified problems or where required procedures/precautions are not being correctly followed.

KEY COMPETENCIES

What processes should be applied to this competency standard? 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	Informing staff about the details of a chemical use management strategy will involve high level communication processes.	3
Collecting analysing and organising information	Identifying and analysing need for chemical use in a workplace. Accessing and interpreting information on chemicals, regulations and MSDS.	3
Planning and organising activities	Carrying out a risk management analysis on chemical use in a workplace requires multiple activities to be organised.	3
Working with others and in teams	Working with staff to ensure that a chemical use strategy fulfils the organisations needs, e.g., through health and safety meetings.	3
Using mathematical ideas and techniques	Carrying out calculations required in chemical use management strategies, e.g., chemical mixture calculations.	3
Solving problems	Identifying risks and potential problems associated with chemical use and developing solutions.	3
Using technology	Developing effective strategies for the maintenance, calibration and use of chemical application equipment.	3

RANGE STATEMENT

What are external requirements for chemical use?

Chemical use regulations and legislation, best practice systems, mandatory Codes of Practice, chemical manufacturers instructions, labels and Material Safety Data Sheets (MSDS).

How might chemical use be documented?	Using computer records, log books, calendars or journals.
What chemicals may be considered for use?	Chemicals may include insecticides, fungicides, herbicides, bactericides, algacides, biologicals, nematocides, rodenticides, fumigants, antimicrobial agents, anthelmintics, hormone growth promotants, or a range of veterinary chemicals used to treat animals for disease.
What information may be relevant to chemical application?	Information may include labels, MSDS, operator's manuals, industry standards, OHS manual or hazardous substances regulation.
What hazards may occur in the transportation, storage, handling and use of chemicals?	Hazards will be listed on labels and the MSDS for the chemical concerned and may include flammability, toxicity, health hazards, damage to non-target organisms, environmental damage, or residues in foods.
What risk factors may be relevant to this standard?	• Risks to environment may include pollution of ground or surface waters, damage to habitats, damage to sensitive land, or damage to community amenity due to spray drift. • Risks associated with the produce include chemical residue in plant produces, livestock or water. • Risks associated with OHS include exposure to chemicals during handling and application, and public health risks.
What risk control measures may need to be applied in the transportation, storage, handling and use of chemicals?	Measures may include providing instructions for handling, transport, storage, obtaining appropriate insurance policies, application and disposal of chemicals in the workplace, ensuring workers read and follow instructions on product label and MSDS, ensuring use, maintenance and storage of correct personal protective equipment, training and accreditation of all staff using chemicals, and ensuring all staff using a chemical understand the specific risks involved and the associated precautions required.
What legislation and regulations may be relevant to this standard?	Legislation may include Pesticide Acts, OHS Acts regarding hazardous substances and application equipment, Dangerous Goods Act, Poisons Act, or Protection of the Environment Acts.

What procedures may need to be addressed in a chemical use management strategy?

Procedures may include identifying needs for specific chemical use as part of IPM/IRM, reading and interpreting product labels and MSDS, mixing chemicals, calibration of application equipment, application of specified products, disposal of unused product, checking, maintenance, repair and disposal of equipment and containers, procedures and precautions for transport and storage, emergency procedures in event of spillage, contamination, accidental contact or ingestion, procedures for keeping records (e.g., chemical inventory, details of chemical use), training and assessment strategy for staff.

What directions and standards may be relevant to this standard?

Directions and standards may include a risk management strategy, registration requirements and IPM/IRM strategies.

What training and assessment strategies may need to be established as part of chemical use management?

- **Internal** training may include on-job coaching and instruction by qualified trainers, performance appraisal by supervisors, training programs conducted in the workplace by contracted registered training organisations.
- **External** training and assessment options may include training programs conducted by registered training organisations, or workshops organised by registered training organisations.

What criteria may be established to evaluate chemical use strategy?

Criteria may include monitoring pest levels over time from an established benchmark.

EVIDENCE GUIDE

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 to human health, agricultural produce, and all aspects of the environment and non-target species of flora and fauna associated with the transport, storage, handling, application and disposal of chemicals.
- Factors that contribute to spray drift, measures to assess the potential for spray drift and prevent or control its occurrence, and the elements of a spray drift management strategy.
- Routes of entry of chemicals into the body and the implications of this on chemical use management strategies.
- Safety procedures including the maintenance, use, fit and decontamination of personal protective clothing and equipment.
- Influence of meteorological factors (temperature, humidity, rain) on quality of chemical application, drift potential, effectiveness and efficacy of use.
- Precautions and risk control measures that may be used to minimise risks and hazards associated with the use of chemicals.
- Principles of IPM/IRM/IAM and their benefits in terms of chemical use risk management.
- Emergency procedures for safety incidents involving chemicals.
- Requirements and options for the keeping of records on chemical use and equipment maintenance and repair.
- Principles of residue effects and their management including persistence in soil and water, accumulation in agricultural produce, rate of breakdown of residues in produce and in the environment, withholding periods, and ways in which residues can occur.
 - Movement of and persistence and degradation of different types of chemicals in various areas of the environment such as soil, air and water.
 - Industry waste agreements, for example drum MUSTER, and Chem Collect
 - OHS legislative requirements and Codes of Practice.
 - Appropriate insurances covering chemical use, transportation and storage.
 - Correct wearing/fit of personal protective equipment.
 - Use of chemicals as part of a comprehensive Quality Assurance (QA) system, Industry QA programs and performance 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:

- Accurately read and interpret labels on chemicals and MSDS.
- Determine the level of hazard and risk associated with chemical use in terms of human health, environment, fauna, flora and produce.
- Apply risk management techniques.
- Develop and evaluate management plans and organisational procedures.
- Communicate management plans, strategies and procedures to staff.

What are the special assessment conditions for this competency standard?

Where this competency standard is being used as part of an accreditation or licence for purchase or use of chemicals, the assessor must meet the requirements of the issuing body.

This may include:

- Accreditation with that issuing body.
- Maintenance of current competency in this competency standard.

Involvement in professional development programs comprising technical and legislative updates on an annual basis.

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 both the **Assessment Guidelines** and the relevant **Sector Booklet**.