



Australian Government

AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to safely prepare and apply chemicals for the control of pests, weeds and diseases, using general application equipment.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

State or territory licensing, legislative or certification requirements apply in some jurisdictions.

Pre-requisite Unit

Nil

Unit Sector

Chemicals (CHM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine the need for chemical use and prepare an application plan	1.1 Identify the pest, weed or disease, and assess the need for control 1.2 Assess the requirement for chemical use 1.3 Assess health and safety hazard, risks and controls for different chemicals 1.4 Confirm requirement for chemical application according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace procedures 1.5 Assess off target risk of each application method 1.6 Assess the environmental risk for application method 1.7 Notify stakeholders of intended chemical application according to workplace procedures and legislative and regulatory requirements 1.8 Prepare application plan according to workplace procedures
2. Prepare chemical mixes	2.1 Identify and select chemical required for target according to application plan 2.2 Calculate the volume, rate or dose according to chemical label instructions 2.3 Identify and select application equipment and set-up requirements according to application plan and operator instructions 2.4 Identify hazards, assess risks and implement control measures for application method according to chemical label and health and safety in the workplace procedures 2.5 Identify, select, fit and use personal protective equipment (PPE) according to workplace procedures 2.6 Select appropriate mixing equipment and suitable location to prepare and load chemicals according to workplace procedures 2.7 Prepare chemicals according to chemical label instructions 2.8 Return unused chemical to store and clean preparation equipment and work site of residues and spillage according to chemical label instructions and workplace procedures
3. Calibrate application equipment	3.1 Select application equipment for chemical according to application plan, off target risks and workplace procedures 3.2 Conduct pre-operational checks of application equipment according to operator and maintenance manual 3.3 Calibrate equipment according to operating instructions and application plan 3.4 Load equipment with chemical according to operating instructions and workplace safety procedures
4. Apply chemicals	4.1 Monitor and assess weather conditions and forecasts to ensure effective chemical application according to application plan 4.2 Select, ensure serviceability, fit and use PPE according to

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	chemical label instructions and workplace procedures 4.3 Apply chemical according to label directions and application plan relating to the control of the pest, weed or disease 4.4 Monitor application equipment for correct performance and ensure effective chemicals application according to operating instructions 4.5 Identify health and safety in the workplace hazards and risks and implement controls 4.6 Clean up spills during application according to chemical label instructions and workplace procedures
5. Clean up equipment and complete records	5.1 Clean and decontaminate application equipment according to operator instructions, safety data sheets (SDS) and legislative requirements 5.2 Dispose of chemicals and used containers according to chemical label instructions, SDS and legislative requirements 5.3 Clean and store PPE according to workplace procedures 5.4 Record and report safety and environmental incidents according to workplace procedures and regulatory requirements 5.5 Record details of chemical application according to workplace procedures and legislative requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Read and interpret SDS, chemical labels, operating instruction and other documentation and consolidates information to determine chemical application actions and activity
Writing	Accurately record and complete organisational records using clear language and terminology
Numeracy	Perform mathematical calculations to determine rates of application chemical mixtures and calibration of equipment
Navigate the world of	Take responsibility for following policies, procedures and

Skill	Description
work	regulations Identify and implement chemical label requirements
Get the work done	Take responsibility for planning, sequencing and prioritising tasks required for chemical application activities

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases	AHCCHM303 Prepare and apply chemicals	Minor change of title for clarity Minor changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCCHM307 Prepare and apply chemicals to control pest, weeds and diseases

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has on at least one occasion demonstrated the ability to safely prepare and apply chemicals ensuring they have:

- determined and confirmed the need for chemical application by assessing the infestation, off target risk, and environmental risks
- developed an application plan for chemical application
- identified health and safety hazards, risk and implemented control procedures according to chemical label
- notified stakeholders of planned chemical application
- used personal protective equipment (PPE) according to workplace procedures
- interpreted chemical labels and applied chemical according to safety data sheets (SDS) and application plan
- identified and selected the chemical required for the target and calculated the amount and rates required according to chemical label
- identified and selected application equipment and suitable location, and determined the set up parameters according to application plan and operator instructions
- monitored and assessed weather conditions and equipment performance to ensure effective chemical application
- selected, conducted pre-operational checks according to operator and maintenance manual
- completed at least one calibration activity for application equipment
- prepared and loaded chemicals and returned unused chemicals to store in accordance with label, application plan and workplace procedures
- applied chemicals safely according to chemical labels, regulations and workplace procedures
- complied with chemical labels, SDS, regulations, maintenance manual, environmental procedures, operator instructions and application plan
- cleaned equipment and spills, and disposed of waste according to workplace and environmental procedures
- maintained records and reported incidents according to workplace procedures and regulatory requirements.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- control options when selecting chemicals for pests, diseases and weeds infestations, including:
 - chemical
 - mechanical
 - cultural
 - biological
 - integrated pest management including resistance management principles
- types of pest, diseases and weed their treatment and resistance
- legal implications and requirements of chemical labels and SDS
- stakeholders and required notifications including, neighbours, staff and statutory notifications
- impact of weather factors on the safe and effective application of chemicals
- characteristics of chemicals, their mode of action and relevance to chemical selection and use, including:
 - translocated/systemic
 - contact
 - ingested poison
 - protectant
 - eradican
 - knock-down
 - residual
 - selective/non selective
- factors that contribute to off target damage, including:
 - physical movement of chemicals (e.g. animals moving baits or soil movement)
 - chemical formulation
 - wind speed and direction
 - temperature and relative humidity
 - temperature inversions
 - controlling off target damage
 - rainfall
 - buffer zones and barriers
- hazards of chemical application, including:
 - human and animal health
 - environmental contamination
 - residues in environment, plants and animals
 - withholding/re-entry periods

- safety requirements when applying chemicals, including:
 - procedures
 - PPE
 - signage
- safe handling, transporting and storage of chemicals
- preparing chemicals including preparation, compatibility, adjuvants and water quality
- requirements for disposal of excess chemicals, clearing spillages and equipment clean up
- selecting and operating suitable application equipment
- features, functions and calibration techniques for powered and hand held application equipment, including:
 - pressure and volume of chemical
 - travel speed
 - nozzle identification, selection, operation
- legislation, regulations and licensing requirements in relation to chemical use.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a typical workplace environment or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chemicals
 - PPE
 - application equipment
 - chemical measuring and mixing equipment
- specifications:
 - specific workplace documents, including work instructions and procedures for chemical application
 - chemical labels and SDS
 - regulations about use of chemicals
 - manufacturers' operation and maintenance instructions for equipment
 - access to weather forecasts or means to measure local weather.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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