



Australian Government

AHCAGB514 Manage application of agents to crops or pastures

Release: 1

AHCAGB514 Manage application of agents to crops or pastures

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency specifies the skills and knowledge required to provide information or manage the application of chemical, biological or organic agents to crops or pastures, utilising application technology.

This unit of competency applies to work in a range of agricultural or support enterprises, such as agronomists and rural merchants. Work is usually undertaken without supervision. Responsibility for, and organisation of, the work of others involved in the program may be required.

All work must be carried out to comply with workplace procedures, work health and safety legislation and codes, and sustainability practices.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Agribusiness (AGB)

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. Analyse application requirements	1.1 Determine goals for application of agents following a review of enterprise production plans and in consultation with land manager 1.2 Access and review records of previous nutrition, pest, weed and disease management including the application of any agents

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Access and review relevant climate, environmental and geographic data from available information systems and sources 1.4 Access and review yield monitoring data including yield variability 1.5 Access and review relevant soil, plant and water information from tests and records
2. Develop an application plan	2.1 Identify performance targets and indicators in the production plan 2.2 Select appropriate agent/s, including adjuvants, method of application and equipment based on site analysis, recommendations, production requirements, environmental conditions and manufacturer specifications 2.3 Select spray nozzles to achieve the optimum droplet size with minimal variation and deliver the appropriate liquid flow rate for the selected agent in the desired spray distribution pattern 2.4 Determine and monitor measures to control factors influencing the level of spray drift 2.5 Determine procedures to ensure compliance with the range of appropriate commonwealth, state and local government legislation and regulations 2.6 Identify work health and safety hazards, assess risks and implement appropriate controls 2.7 Determine environmental impacts of application and implement appropriate clean up strategies to the area 2.8 Schedule applications taking the range of seasonal, geographic and resourcing factors into consideration 2.9 Record details of applications, as required by legislation, regulations and codes of practice
3. Monitor and evaluate the effectiveness of the application plan	3.1 Evaluate the effectiveness of the application at key points and make adjustments to ensure appropriate coverage 3.2 Monitor and assess environmental impacts and work health and safety hazards relating to application strategies throughout the implementation process 3.3 Make modifications to the plan as and when necessary to address environmental, work health and safety, resourcing or effectiveness issues 3.4 Analyse data, observations and documentation from the

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implementation of the application plan against the plan to assess effectiveness 3.5 Prepare recommendations for future strategies based on the analysis of the data 3.6 Record details of the implementation including information on any difficulties or issues faced, technical details, environmental and work health and safety issues, recommendations for future action, results, costs and any available data analysis

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
Learning	Apply digital literacy to program application technology
Reading	Accurately interpret manufacturer instructions and agent labels
Numeracy	Calculate and measure chemicals and agents accurately, following instructions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCAGB514 Manage application of agents to crops or pastures	AHCAGB506 Manage application technology	Updated title Performance criteria clarified Foundation skills added Assessment requirements updated	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 AHCAGB514 Manage application of agents to crops or pastures

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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 managed the application of a chemical, biological or organic agent to at least one designated crop or pasture, including:

- determined the need for the agent
- developed an application plan that includes addressing environmental and work health and safety issues
- programmed application technology
- monitored the effectiveness of the application.

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:

- technology to manage application of agents to crops and pastures
- Geographic Information Systems (GIS) and Global Positioning Systems (GPS) and how data from these systems is used in farm management
- types of data used to define field parameters, including aspect and slope
- characteristics of pest, weed and disease species including their life cycles and reproduction capability
- principles of integrated pest and weed management
- range and classes of fertilisers, herbicides, insecticides and fungicides available and their basic chemistry
- growth stages of weeds and plant morphology
- the effects on crops of weeds, pests, diseases and/or lack of soil fertility
- mode of action of chemical or biological control agents and long term effects of these agents with respect to plant back periods and resistance
- range and effect of different nozzles, pressures, spray patterns, droplet sizes and basic physics of droplets and fluids
- work health and safety hazards and controls

- environmental impact of agents used
- best management practices and processes to minimise the impact of agents
- commonwealth, state and local government legislation and regulations.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - designated crop or pasture
 - chemical, biological or organic agents
 - spray equipment
- specifications:
 - manufacturer instructions for agents and spray equipment
 - legislation, regulations and codes of practice applicable to chemicals and land-based businesses.

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

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