



Australian Government

AHCBAC510 Manage integrated crop and pasture production

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 6.0.

Application

This unit of competency describes the skills and knowledge required to develop and implement a pasture and crop management program, monitor crop and pasture growth and fodder production, and review production outcomes.

The unit applies to individuals who apply specialised skills and knowledge to the management of integrated crop and pasture production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and analyse, design and communicate solutions to sometimes complex problems.

All work must be carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, and sustainability and biosecurity practices.

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

Pre-requisite Unit

Nil

Unit Sector

Broad Acre Cropping (BAC)

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. Develop a pasture and crop program	1.1 Establish production targets for each crop and pasture type consistent with market and production constraints, and marketing and workplace objectives

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.2 Select plant varieties that are best suited to soil, climate, seasonal conditions and marketing goals for crop or pasture 1.3 Determine longer term trends in weed, pest and disease incidence and evaluate any necessary control measures, including integrated weed management strategies 1.4 Assess soil moisture, rainfall patterns, decile probability, evaporation, wind and moisture requirements for growth 1.5 Assess nutrient requirements for crops and pastures to determine appropriate fertiliser programs 1.6 Assess technology to ensure efficient performance of operations 1.7 Identify and maintain budgetary constraints 1.8 Develop a pasture and crop program to meet production targets and workplace objectives 1.9 Identify workplace health and safety hazards in crop and pasture management, and develop control strategies
2. Implement pasture and crop management program	2.1 Implement and monitor pasture and crop program to ensure capacity and development is as planned 2.2 Implement planned weed, pest and disease control 2.3 Determine and conduct fertiliser and pesticide applications and rates appropriate to crop or pasture type 2.4 Apply crop and pasture nutrient requirements to ensure achievement of yield and sustainability of pasture 2.5 Evaluate in-season soil moisture and review crop and pasture production potential 2.6 Determine and implement processes to minimise waste and soil degradation, and meet environmental and sustainability standards
3. Monitor crop and pasture growth and fodder production	3.1 Monitor soil structure, water infiltration and erosion in accordance with workplace procedures and biosecurity requirements 3.2 Monitor grazing management 3.3 Integrate livestock into the cropping cycle through grazing of pastures returning to crop, stubbles and crop residues, and dual purpose crops 3.4 Measure, identify and calculate feed surpluses and deficiencies and take appropriate action 3.5 Monitor crop and pasture maturity and conduct harvesting to

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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	maximise quality and volume of harvesting efficiency 3.6 Determine if cultural practices, grazing management are conducive to production requirements and implement changes to practices where necessary
4. Review production outcomes	4.1 Monitor pasture and crop yields and evaluate against production targets and determine possible reasons for variance 4.2 Evaluate efficiency and effectiveness of grazing and cropping programs and document for future best practice 4.3 Evaluate workplace production performance and document for management program review 4.4 Maintain appropriate production and operations records for production performance analysis and evaluation

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	- Identify and interpret information regarding the growing requirements of the crop and pasture - Identify and interpret marketing and workplace objectives
Writing	Develop and maintain a fertiliser and pesticide program, and production and operations records
Numeracy	- Access and interpret budget data - Calculate feed surpluses and deficiencies, including biomass - Access and analyse data for input to fertiliser and pesticide program, pasture and crop program, production and operations records

Unit Mapping Information

Code and title	Code and title	Comments	Equivalence status
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current version	previous version		
AHCBAC510 Manage integrated crop and pasture production	AHCBAC503 Manage integrated crop and pasture production	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

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 AHCBA510 Manage integrated crop and pasture production

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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 integrated crop and pasture production on at least one occasion, and has:

- determined fertiliser and pesticide application rates
- applied correct use of technology to improve efficiency
- identified financial strategies and maintained budgetary constraints
- developed a pasture and crop program to meet production targets and workplace objectives
- developed and implemented relevant workplace health and safety procedures
- monitored soil structure and erosion and made required changes to cultural practices and grazing management
- evaluated grazing and cropping programs for efficiency and effectiveness.

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:

- land and soil capability, and marketing constraints and their impact on sustainable production
- establishment and cultivation requirements for different types of crop
- infestation patterns and control measures for different types of weeds, including integrated weed management strategies
- the use of soil nutrients to improve crop production
- role and assessment of technology in improving efficiency and competitiveness
- relevant workplace health and safety legislation, regulations and workplace procedures
- types of fertilisers and pesticides, their use, application and safe handling processes
- environmental standards applicable to managing integrated crop and pasture production
- methods for measuring crop and pasture development, capacity and quality.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - workplace budget, marketing and objectives
- specifications:
 - workplace health and safety legislation, regulations and workplace procedures applicable to managing integrated crop and pasture production
- timeframes:
 - according to the job requirements.

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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