

**Modification history**

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

AHC503	Manage integrated crop and pasture production
<b>Application</b>	<p>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.</p> <p>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.</p> <p>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.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Broad acre cropping (BAC)

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 marketing production constraints, marketing and workplace objectives 1.2 Select plant varieties that are best suited to soil, climate, seasonal conditions and marketing goals 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 program 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

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
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 or pasture production potential 2.6 Determine and implement processes to minimise waste, soil degradation, and environmental and sustainability standards
3. Monitor crop or pasture growth and fodder production	3.1 Monitor soil structure, water infiltration and erosion, determine and implement any necessary changes to cultural practices, grazing management and drainage where applicable 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 Identify and calculate feed surpluses and deficiencies and take appropriate action 3.5 Monitor crop or pasture maturity and conduct harvesting to maximise quality and volume of harvesting efficiency
4. Review production outcomes	4.1 Monitor pasture and crop yields and evaluate against forecast production levels 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

<b>Foundation Skills</b>	
<i>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.</i>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>Identify and interpret information regarding the growing requirements of the crop and pasture</li> <li>Identify and interpret marketing and workplace objectives</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Develop a fertiliser and pesticide program, pasture and crop program, production and operations records</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Access and interpret budget data</li> <li>Calculate feed surpluses and deficiencies, including biomass</li> <li>Access and analyse data for input to fertiliser and pesticide program, pasture and crop program, production and operations records</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
AHCBC503 Manage integrated crop and pasture production Release 2	AHCBC503 Manage integrated crop and pasture production Release 1	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</a>
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<b>TITLE</b>	<b>Assessment requirements for AHCBAC503 Manage integrated crop and pasture production</b>
<b>Performance Evidence</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>• measured and assessed quantities of fertiliser and pesticide</li> <li>• applied environmental protection strategies in land use</li> <li>• set objectives and milestones</li> <li>• determined soil quality and land use capability</li> <li>• monitored soil moisture levels to avoid soil degradation</li> <li>• applied correct use of technology to improve efficiency</li> <li>• identified financial strategies and maintained budgetary constraints</li> <li>• developed a pasture and crop program to meet production targets and workplace objectives</li> <li>• maintained the productivity of crops and pastures in a farming system</li> <li>• monitored soil structure and erosion and made required changes to cultural practices and grazing management</li> <li>• implemented grazing strategies to optimise pasture and livestock production levels and support the cropping program</li> <li>• evaluated grazing and cropping programs for efficiency and effectiveness</li> <li>• used physical and financial records of production to evaluate production performance</li> <li>• developed and implemented relevant workplace health and safety procedures.</li> </ul>	
<b>Knowledge Evidence</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>• land and soil conditions and constraints</li> <li>• effects of nutrients on soil types</li> <li>• crop and pasture production cost calculation and financial analysis techniques</li> <li>• environmental standards</li> <li>• establishment and cultivation requirements for different types of crop</li> <li>• methods for measuring crop and pasture development, capacity and quality</li> <li>• safe handling processes for fertilisers and pesticides</li> <li>• role of technology in improving efficiency and competitiveness</li> <li>• infestation patterns for different types of weed</li> <li>• relevant workplace health and safety legislation, regulations and workplace procedures.</li> </ul>	
<b>Assessment Conditions</b>	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions:             <ul style="list-style-type: none"> <li>• a workplace setting or an environment that accurately represent workplace conditions</li> </ul> </li> <li>• resources, equipment and materials:             <ul style="list-style-type: none"> <li>• workplace budget, marketing and objectives</li> </ul> </li> <li>• specifications:             <ul style="list-style-type: none"> <li>• workplace health and safety legislation, regulations and workplace procedures applicable to managing integrated crop and pasture production</li> </ul> </li> <li>• timeframes:             <ul style="list-style-type: none"> <li>• according to the job requirements.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<b>Links</b>	<p>Companion Volumes, including Implementation Guides, are available at VETNet:  <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</a></p>