

## 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.

AHCBAC508	Apply plant biology to agronomic practices
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to apply introductory plant biology, including plant taxonomy, plant morphology and plant physiology to a wide range of agronomic practices.</p> <p>The unit applies to individuals who apply specialised skills and knowledge to the application of plant biology to agronomic practice, 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, regulatory 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. Apply plant taxonomy to agronomic practices	1.1 Identify botanical terminology of plant taxonomy, including plant kingdom divisions, major plant families and genera for plant classification 1.2 Apply the rules of plant nomenclature when naming plants 1.3 Describe the external features of plants, including leaves, stems, flowers and fruits using botanical terminology 1.4 Identify a range of plants used in agronomy to species level, using plant keys and other references where required 1.5 Use correct botanical terminology to discuss plant taxonomy in agronomic practices with appropriate personnel
2. Identify plant functions and their impact on growth	2.1 Investigate and identify plant cell structures, their functions and the organisation of cells into primary tissues 2.2 Research the structure and functions of leaves, stems, root and flowers in relation to agronomic practices 2.3 Describe the processes and outcomes of photosynthesis, respiration and transpiration
3. Apply plant morphology to agronomic practices	3.1 Research, analyse and document specialist botanical knowledge of plant morphology, including leaf, root, stem, flower and seed characteristics from development to maturity for crop and pasture management 3.2 Use correct botanical terminology when discussing with appropriate personnel plant morphology and identifying growth stages of plants 3.3 Identify critical growth stages for crop and pasture monitoring, nutrient assessment and spray applications

<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 botanical terminology of plant taxonomy and plant nomenclature</li> <li>Identify and interpret plant key information</li> <li>Analyse and interpret specialist botanical information of plant morphology</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Document specialist botanical knowledge of plant morphology</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>Initiate discussions with appropriate personnel, using clear language to discuss plant taxonomy, morphology and critical growth stages</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>
AHCBA508 Apply plant biology to agronomic practices Release 2	AHCBA508 Apply plant biology to agronomic practices 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 AHCBAC508 Apply plant biology to agronomic practices</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 applied plant biology to agronomic practices on at least two occasions and has:</p> <ul style="list-style-type: none"> <li>• used appropriate authoritative references and resources for plant classification</li> <li>• used appropriate keys to identify plant species</li> <li>• applied scientific concepts of plant biology to agronomic practices</li> <li>• identified plants according to accepted taxonomic classifications.</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>• plant morphology</li> <li>• plant taxonomy</li> <li>• plant physiology</li> <li>• plant nomenclature according to the rules and recommendations of: <ul style="list-style-type: none"> <li>• the International Code of Botanical Nomenclature (ICBN)</li> <li>• the International Code of Nomenclature for Cultivated Plants (ICNCP)</li> </ul> </li> <li>• characteristics of plants at various growth stages, from germination to maturity</li> <li>• broad knowledge of agronomic practices and relationship to plant development.</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>• plants</li> </ul> </li> <li>• specifications: <ul style="list-style-type: none"> <li>• the International Code of Botanical Nomenclature (ICBN)</li> <li>• the International Code of Nomenclature for Cultivated Plants (ICNCP)</li> </ul> </li> <li>• relationships: <ul style="list-style-type: none"> <li>• appropriate personnel</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>