



Australian Government

AHCBAC513 Apply plant biology to agronomic practices

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 apply introductory plant biology, including plant taxonomy, plant morphology and plant physiology, to a wide range of agronomic practices.

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.

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, regulatory 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. 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

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 Apply the rules of plant nomenclature when naming plants 1.3 Identify the external features of plants, including leaves, stems, flowers and fruits 1.4 Identify a range of plants used in agronomy to species level, using plant botanical key and other references where required 1.5 Use 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 Identify the processes and outcomes of photosynthesis, respiration and transpiration
3. Apply knowledge of 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 botanical terminology when discussing plant morphology and growth stages 3.3 Identify critical growth stages for crop and pasture monitoring, nutrient assessment and spray applications

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
Oral communication	Initiate discussions with appropriate personnel, using clear language to discuss plant taxonomy, morphology and critical growth stages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBC513 Apply plant biology to agronomic practices	AHCBC508 Apply plant biology to agronomic practices	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 AHCBAC513 Apply plant biology to agronomic practices

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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 applied plant biology to agronomic practices on at least two occasions, and has:

- identified plants according to accepted taxonomic classifications
- used appropriate authoritative references and resources for plant classification
- used an appropriate botanical key to identify a variety of plant species, including:
 - natives
 - introduced plants
 - crops or pastures
- described plant taxonomy, morphology and critical growth stages
- applied scientific concepts of plant biology to agronomic practices.

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:

- principles of agronomy and agronomic practices, including:
 - plant taxonomy
 - plant nomenclature
 - plant physiology
 - plant morphology
 - relationship to plant development
 - farming systems
 - weeds as indicators of soil conditions
 - characteristics of plants at various growth stages, from germination to maturity.

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:
 - plants
 - botanical key
- relationships:
 - appropriate personnel
- 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.

Links

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