



Australian Government

AHCBAC508 Apply plant biology to agronomic practices

Release: 1

AHCBA508 Apply plant biology to agronomic practices

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency covers the application of introductory plant biology (plant taxonomy, plant morphology and plant physiology) to a wide range of agronomic practices including crop/pasture establishment, fertiliser use, irrigation, Integrated Pest Management (IPM), crop harvesting, grazing management and the provision of specialist agronomic advice.

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

This unit applies to work as an agronomist. Work is normally undertaken without supervision.

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

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Apply plant taxonomy to agronomic practices	1.1 Identify botanical terminology of plant taxonomy (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 – 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/or other references where required

Element	Performance criteria
	1.5 Use correct botanical terminology to discuss plant taxonomy in agronomic practices
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 (leaf, root, stem, flower and seed characteristics from development to maturity) for crop and pasture management 3.2 Use correct botanical terminology when discussing plant morphology and identifying growth stages of plants 3.3 Identify critical growth stages for crop/pasture monitoring, nutrient assessment and spray applications

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - equivalent to VU21630 Apply plant biology to agronomic practices.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCBA508 Apply plant biology to agronomic practices

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Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence that they can:

- use appropriate authoritative references and resources for plant classification
- apply scientific concepts of plant biology to agronomic practices
- identify plants according to accepted taxonomic classifications.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- plant morphology
- plant taxonomy
- plant physiology
- plant nomenclature according to the rules and recommendations of the International Code of Botanical Nomenclature (ICBN) and the International Code of Nomenclature for Cultivated Plants (ICNCP)
- broad knowledge of agronomic practices.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

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