



Australian Government

AHCPCM509 Apply knowledge of plant physiology to horticultural 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 research plant structures, investigate plant growth and responses to horticultural practices, and analyse plant reproduction for horticultural practices.

The unit applies to individuals who apply specialist skills and knowledge to apply knowledge of plant physiology to horticultural practices, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information, and design and communicate solutions to sometimes complex problems.

All work is 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

Plant Culture and Management (PCM)

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. Research plant structures	1.1 Identify and categorise plant cell structures, the organisation of cells into primary tissues and plant structural features

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 Determine the functions of plant cells, primary tissues and plant structural features and their relation to plant growth 1.3 Explain the physiological processes of photosynthesis, cellular respiration, transpiration and translocation in plants, including their role in plant function
2. Investigate plant growth responses to horticultural practices	2.1 Analyse physiological plant responses to physical and environmental conditions and the horticultural practices that may impact on plant functioning 2.2 Examine the role of plant growth regulators on plant growth and function 2.3 Evaluate information on plant growth responses and the addition of plant growth regulators, and the implications for horticultural practices 2.4 Research and describe methods to manipulate the physical and environmental conditions to achieve desired plant growth responses in horticultural practices
3. Analyse plant reproduction for horticultural practices	3.1 Identify the physiological processes of asexual and sexual reproduction of plants 3.2 Describe the methods of seed and propagule dispersal used by plants 3.3 Research and evaluate plant reproduction information for a range of plants

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 botanical and biological references and information relevant to plant physiology and horticultural practices
Oral communication	Use clear language and accurate industry terminology to explain the physiological processes of photosynthesis, cellular respiration, transpiration and translocation in plants, including their role in

Skill	Description
	plant function, and describe the manipulation of physical and environmental factors to achieve desired plant growth responses and optimum plant health

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCP509 Apply knowledge of plant physiology to horticultural practices	Not applicable	The unit has been created to address an emerging skill required by industry	Newly created

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -

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