Modification history

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

AHCPCM501	Diagnose plant health problems
Application	This unit of competency describes the skills and knowledge required to monitor, diagnose and remedy plant health problems and evaluate treatment plan.

The unit applies to individuals who apply specialised skills and knowledge to diagnose plant health problems, 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 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. |
| **Prerequisite Unit** | Nil |
| **Unit Sector** | Plants culture and management (PCM) |

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Monitor factors that influence plant health	1.1 Identify the plant species to the lowest taxonomic level and state its region of origin
1.2 Determine plant seasonal growth stages
1.3 Record daily cultural practices used on each horticultural species
1.4 Determine the growing environment characteristics that affect the growth of a specific plant species
1.5 Record climatic data and environmental growing conditions
1.6 Record the presence or numbers of beneficial organisms
2. Diagnose plant health problems	2.1 Identify environmental and cultural factors that predispose plants to attack by pests and diseases
2.2 Identify the symptoms and signs of plant health problems using accepted nomenclature
2.3 Assess the severity and extent of the problem in a plant species
2.4 Compare observations with published data, historical records and own experience
2.5 Determine possible causes of the plant health problem
2.6 Consult with specialist services in severe, complex or rapid onset cases
2.7 Sample plant or soil specimens and dispatch for specialist diagnosis or laboratory testing where required
2.8 Record and document plant disorders and problems in a report

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Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
3. Remedy plant health problems	3.1 Formulate a weed, pest and disease control plan according to workplace integrated pest management (IPM) strategy and production plan requirements 3.2 Identify a range of modifications to growing conditions for a specific situation or plant species to rectify plant health problems 3.3 Identify, cost and confirm availability of resources, tools, equipment and machinery required for work activities, and analyse benefits 3.4 Identify hazards and assess risks associated with work activities and implement control measures according to workplace health and safety procedures 3.5 Identify and minimise environmental impacts of weed, pest and disease control plan according to environmental and biosecurity legislation, regulations and workplace procedures
4. Evaluate treatment plan	4.1 Monitor plants during treatment 4.2 Record and analyse monitoring data 4.3 Compare observations and data to expected results 4.4 Recommend treatment plan modifications to client or management 4.5 Document and present treatment plan report to client or management

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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 plant growing requirements, cultural practices and factors, signs of health problems, and weed, pest and disease control
Writing	• Record climatic data and record and document plant disorders and problems report • Document weed, pest and disease control plan, and treatment plan report
Oral communication	• Initiate discussions with specialist services, using clear language to communicate severe, complex or rapid onset cases • Initiate discussions with clients or management, using clear language to recommend treatment plan modifications, and present treatment plan report
Numeracy	• Access and analyse climatic data, published data and historical records for input to plant disorders and problems report and weed, pest and disease control plan • Calculate and analyse resources, tools, equipment and machinery costs • Record and analyse monitoring data for input to treatment plan report

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPCM501 Diagnose plant health problems Release 2	AHCPCM501 Diagnose plant health problems Release 1	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72

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See *Guidelines* for the skills to be described, the order in which to list them and hints on writing descriptions

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TITLE	Assessment requirements for AHCPCM501 Diagnose plant health problems

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 diagnosed plant health problems on at least two occasions and has:

- researched information about plant health problems, their diagnosis and remedial treatments
- differentiated between pest, disease and nutrient associated symptoms
- identified signs and symptoms of plant health problems
- assessed the severity, extent and speed of onset of health problems in a specific situation
- determined possible causes of the problem
- liaised with specialist services, clients and management
- formulated a weed, pest and disease control plan
- applied relevant workplace health and safety, and environmental and biosecurity legislation, regulations and workplace procedures
- implemented treatment plan to remedy the diagnosed health problems
- evaluated treatment plan and recommended modifications.

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 and practices of plant health, including:
  - chemical use, toxicity and compatibility with target plants, growth media, and environmental characteristics of the horticultural region
  - chemical, cultural and biological control methods
  - evaluation procedures, including cost and benefit analysis, for plant and growth media treatments in relation to plant health, workplace budget and performance targets
  - plant anatomy, morphology, physiology, histology, pathology, taxonomy and nomenclature
  - plant nutrition issues associated with the growth media used and horticultural region for specific plant species
  - sustainable horticultural practices relevant to the workplace or horticultural region
  - taxonomic descriptions, horticultural function, cultural and growth requirements, and target growth and performance characteristics of specific horticultural plants for the achievement of workplace production and business plans
  - weeds, pests and disease detection methods, taxonomic identification, life cycle stages and characteristic symptoms for the specific horticultural plants of the workplace
- workplace integrated pest management (IPM) strategy and production plan requirements
- workplace health and safety, and environmental and biosecurity legislation, regulations and workplace procedures relevant to diagnosing plant health problems
- workplace and industry record keeping and reporting procedures and requirements.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
  - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
  - published data and historical records relevant to diagnosing plant health problems
  - workplace integrated pest management (IPM) strategy and production plan requirements
- specifications:
  - workplace health and safety, and environmental and biosecurity legislation, regulations and workplace procedures relevant to diagnosing plant health problems
  - workplace and industry record keeping and reporting procedures and requirements
- relationships:
  - specialist services, clients or management
- timeframes:
  - according to job requirements

Assessment Conditions
Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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