



Australian Government

Department of Education, Employment and Workplace Relations

AHCPCM501A Diagnose plant health problems

Release: 1

AHPCPM501A Diagnose plant health problems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of diagnosing plant health problems and defines the standard required to: identify plant species and describe their growing requirements and characteristics; assess the suitability of the growing environment and the level of beneficial organisms; diagnose and record plant disorders and diseases; formulate a weed, pest or disease control program using the principles of Integrated Pest Management (IPM); implement modifications to plant growing conditions; document a treatment program report.
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Application of the Unit

Application of the unit	This unit applies to the process of diagnosing plant health problems and is likely to be undertaken without supervision.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Monitor factors that influence plant health	1.1. The plant species is identified to the lowest taxonomic level, and its region of origin stated. 1.2. The seasonal growth stages of the plant are determined. 1.3. Day to day cultural practices used on each horticultural species are recorded. 1.4. Characteristics of the growing environment that affect the growth of a specific plant species are determined. 1.5. Climatic data and environmental growing conditions are recorded. 1.6. The presence (or numbers) of beneficial organisms is recorded according to enterprise guidelines.
2. Diagnose plant health problems	2.1. Environmental and cultural factors that predispose plants to attack by pests and diseases are identified. 2.2. The symptoms and signs of plant health problems are identified using accepted nomenclature. 2.3. The severity and extent of the problem in a plant species are assessed. 2.4. Observations are compared with published data, historical records, own experience, and enterprise guidelines. 2.5. The possible causes of the plant health problem are determined. 2.6. Consult with specialist services in severe, complex or rapid onset cases. 2.7. Plant or soil specimens are sampled and dispatched for specialist diagnosis or laboratory testing where required. 2.8. Plant disorders and problems are recorded and documented in a report.
3. Remedy plant health problems	3.1. A weed, pest and disease control program is formulated according to the enterprise IPM strategy and production plan. 3.2. Resources, tools, equipment and machinery required for work activities are identified, costs/benefits analysed, and availability confirmed with suppliers, contractors and appropriate personnel. 3.3. Occupational Health and Safety (OHS) hazards associated with work activities are identified, risks assessed and controls implemented. 3.4. A range of modifications to growing conditions that

ELEMENT	PERFORMANCE CRITERIA
	could be considered in a specific situation are identified. 3.5. Modifications to growing conditions for a specific plant species are selected and implemented, having regard to cost of damage, marketing requirements and sustainable horticultural practices.
4. Evaluate treatment program	4.1. Plants are monitored during treatment. 4.2. Appropriate data is recorded according to enterprise guidelines. 4.3. Observations are compared to expected results. 4.4. Modifications to the treatment program are recommended to client/management. 4.5. Treatment program report is documented and presented to client/management.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- differentiate between pest and disease and nutrient associated symptoms in specific plant species
- research information about plant health problems, their diagnosis and remedial treatments available
- identify signs and symptoms of plant health problems
- determine possible causes of the problem
- assess the severity, extent and speed of onset of the problem
- implement treatment programs to remedy the diagnosed health problems
- comply with legislative requirements
- identify hazards, assess risk and implement controls
- comply with OHS requirements of the workplace
- communicate orally with staff, supervisors, contractors, suppliers and consultants
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for

REQUIRED SKILLS AND KNOWLEDGE

- clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- plant anatomy, morphology, physiology, histology, pathology, taxonomy and nomenclature
- taxonomic descriptions, horticultural function, cultural and growth requirements, and target growth and performance characteristics of specific horticultural plants for the achievement of enterprise production and business plans
- plant nutrition issues associated with the growth media used, and horticultural region for specific plant species
- weeds, pests and disease detection methods, taxonomic identification, life cycle stages and characteristic symptoms for the specific horticultural plants of the enterprise
- chemical, cultural and biological control methods included in the IPM strategy of the enterprise
- chemical use, toxicity and compatibility with target plants, growth media, and environmental characteristics of the horticultural region
- sustainable horticultural practices relevant to the enterprise and/or horticultural region
- evaluation procedures, including cost/benefit analysis, for plant and growth media treatments in relation to plant health, enterprise budget and performance targets
- enterprise and industry record keeping and reporting policies and requirements
- OHS hazards associated with activities to promote plant health and the controls necessary to remove or minimise risks associated with them.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • identify plant species and describe their growing requirements and characteristics • assess the suitability of the growing environment and the level of beneficial organisms • diagnose and record plant disorders and diseases • formulate a weed, pest or disease control program using the principles of Integrated Pest Management • implement modifications to plant growing conditions • document a treatment program report.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Plants may include:	• all plant species and cultivars.

Unit Sector(s)

Unit sector	Plants
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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