



Australian Government

Department of Education, Employment and Workplace Relations

FDFWGG2017A Recognise disorders and identify pests and diseases

Release: 2

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Modification History

This unit supersedes and is equivalent to FDFWGGPDDA Recognise disorders and identify pests and diseases.

April 2012: Minor typographical corrections.

Unit Descriptor

Unit descriptor	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to recognise symptoms of pests, diseases and plant disorders at all stages of vine growth, to identify pests and diseases, and to report details in a timely and effective manner to appropriate personnel.
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Application of the Unit

Application of the unit	This unit requires recognition of symptoms of vine disorders but does not require identification of causes, such as nutrient deficiency or toxicity.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

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

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Monitor vine health	1.1 Vineyard is monitored according to workplace procedures 1.2 Pest and disease symptoms are recognised 1.3 Symptoms of plant disorders are recognised
2. Assess symptoms of vine pests, diseases and disorders	2.1 Pests or diseases are identified from symptoms 2.2 Severity of pest or disease infestation or plant disorder is identified 2.3 Spread of infestation or disorder is identified 2.4 Vineyard location of infestation or disorder is identified
3. Report to appropriate personnel	3.1 Details of pest or disease infestation are reported to appropriate personnel according to workplace procedures 3.2 Details of plant disorder are reported to appropriate personnel according to workplace procedures

Required Skills and Knowledge

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

Required skills include:

Note: The following required skills should be applied as appropriate to the equipment and processes that are used in the particular winery or workplace.

Ability to:

- access workplace information to identify recognition and identification requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- implement monitoring procedures according to workplace requirements
- monitor the health and growth of vines. This may include monitoring:
 - environmental factors
 - cultural factors
 - signs of pests and diseases
 - signs of plant disorders
- identify different parts of the grapevine. This will include:
 - vine trunk and permanent framework
 - canes and/or cordons
 - tendrils and buds
 - fruit
- identify and describe common vineyard weed species
- identify and describe common pests and diseases, including:
 - light brown apple moth (LBAM)
 - powdery mildew
 - downy mildew
 - botrytis
 - mites
- recognise and report pest and disease activity or symptoms of plant disorders in an appropriate time for treatment to be timely and effective
- identify, rectify and/or report environmental non-compliance
- maintain work area to meet housekeeping standards
- clean and store equipment according to instructions
- operate information technology systems according to enterprise procedures
- use oral communication skills/language to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce.

Required knowledge includes:

Note: The following required knowledge should be applied as appropriate to the equipment and

processes that are used in the particular winery or workplace.

Knowledge of:

- range of vine monitoring procedures, which may include manual and/or automated sampling and testing techniques
- basic vine physiology, as it applies to:
 - water intake
 - nutrient uptake
 - photosynthesis
 - transpiration, respiration
 - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine and their role in how the vine works, including:
 - buds, nodes and tendrils
 - cambium, epidermis, phloem and xylem
 - leaf blade, bract and petiole
 - bunch, berries and flowers
 - Annual growth stages of grapevines, including:
 - budburst
 - flowering
 - veraison
 - maturity
- vine types, their characteristics and uses, including:
 - family, genus and species
 - *Vitis vinifera* and commercial varieties
 - native species and hybrids (e.g. *labrusca*)
 - root stocks and scion stock
- key grape varieties and their distinguishing features. This may include factors, such as:
 - berry and bunch characteristics
 - frost and disease resistance
 - flavour and style
- a range of common vine disorders, pests and diseases, according to workplace requirements
- influence on the occurrence and development of vine disorders, pests and diseases of climatic factors (e.g. wind speeds, rainfall levels, humidity, dry heat and hail)
- pest and disease tolerance thresholds
- vine disorder reporting requirements and procedures
- purpose and application of personal protective clothing and/or equipment
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- reporting responsibilities and procedures
- information technology systems where relevant

- basic principles of workplace's integrated pest management (IPM) program where relevant
- pest and disease resistance management strategies employed by the workplace where relevant.

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	Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of ability to: • use personal protective equipment, MSDS and follow other specified OHS procedures • recognise symptoms of plant pests, diseases and disorders • identify location and extent of spread • determine severity of pests, diseases and disorders • report findings.
Context of and specific resources for assessment	Assessment must occur in a real or simulated workplace where the assessee has access to: • personal protective clothing and equipment as required • work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements • instructions, information, specifications and schedules as required • equipment, services and corresponding information as required • products and materials as required • internal and external customers and suppliers as required • cleaning procedures, materials and equipment as required • documentation and recording requirements and procedures.
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency in one's performance, competence should be demonstrated on more than one occasion over

EVIDENCE GUIDE

a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Policies and procedures

Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements

Workplace information

Workplace information can include:

- Standard Operating Procedures (SOPs)
- specifications
- production schedules
- instructions
- routine maintenance schedules
- work notes
- Material Safety Data Sheets (MSDS)
- manufacturer instructions
- verbal direction from manager, supervisor or senior operator

Monitoring procedures

Vineyard monitoring procedures may include:

- monitoring techniques and monitoring schedules

Monitoring equipment

Vineyard monitoring equipment may include:

- manual or automated sampling and testing kits, and pest and disease information

Pests and diseases

Pests and diseases may include, but are not limited to:

- any form of vertebrate and invertebrate pest, weeds, and fungal, bacterial or viral disease
- light brown apple moth (LBAM)

RANGE STATEMENT	
	• powdery mildew • downy mildew • botrytis • mites
Reporting of pests and diseases	Reporting details of pests and diseases may include: • identification of pest or disease • location and quantity of affected plants • severity of attack • life cycle stage of pest • developmental stage of disease • number of pests • extent of disease on individual plants
Symptoms of plant disorders	Symptoms of plant disorders may include: • discolouration • stunted or abnormal plant parts • uneven growth or fruit set • dropping of plant parts (e.g. leaves and flowers) • general poor growth • burning off of extremities (e.g. tendrils and leaves) • weak or rotting plants parts (e.g. stems and fruit)
Reporting for plant disorders	Reporting details for plant disorders may include: • severity of symptoms • spread of symptoms • location of affected plants in vineyard • development of symptoms • any associated environmental or cultural factors that may be considered relevant (e.g. watering or fertilisation problems, mulch problems, recent vine work or treatment application)
Information systems	Information systems may be: • print or screen based and may include information technology systems, such as database of workplace or site pest, disease and disorder histories, symptom recognition and pest and disease identification aids, climatic information systems, work scheduling, reporting and recording systems

Unit Sector(s)

Unit sector	Wine operations
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