



Australian Government

FDFWGG3009A Monitor and maintain nursery plants

Release: 2

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Modification History

This unit supersedes and is equivalent to FDFWGGMNPB Monitor and maintain nursery plants.

April 2012: Minor typographical corrections.

Unit Descriptor

Unit descriptor	This specialist unit has been developed for wine grape nurseries. It covers the skills and knowledge required to monitor and maintain containerised nursery plants.
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Application of the Unit

Application of the unit	This unit includes maintaining the plant environment to ensure it supports optimum growth and health and meets stock requirements.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Pre requisite units		
	FDFWGG2007A	Tend containerised plants
	FDFWGG2012A	Identify and treat nursery plant disorders

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 environmental parameters	<p>1.1 Environmental parameters are monitored against the production plan and according to workplace procedures</p> <p>1.2 Environmental parameters are altered to meet the needs of the plants and according to workplace procedures</p>
2. Determine daily water requirements	<p>2.1 Plant water needs are determined according to workplace procedures</p> <p>2.2 Water is applied according to the needs of the plants and workplace procedures</p> <p>2.3 Water requirements are monitored according to workplace procedures</p>
3. Implement treatments to promote plant growth	<p>3.1 Potting media is tested to ensure specifications are met</p> <p>3.2 Overall health of plants is monitored according to workplace procedures</p> <p>3.3 Plant treatments are implemented according to production plans and workplace procedures</p> <p>3.4 Problems and anomalies are identified, rectified and/or reported according to workplace procedures</p>
4. Monitor the dispatch of stock	<p>4.15 Availability of stock and timing of dispatch is confirmed with customers according to workplace procedures</p> <p>4.2 Plants are prepared for dispatch in line with customer requirements</p> <p>4.3 Stock is checked to ensure it meets quality specifications</p> <p>4.4 Orders are checked against stock being dispatched to ensure compliance</p>
5. Record information	5. Workplace information is recorded in the appropriate format

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 required to monitor and maintain nursery plants
- liaise with other work areas and customers
- select, fit and use appropriate personal protective clothing and/or equipment
- identify potential and existing hazards in the work area
- identify, rectify and/or report environmental non-compliance
- monitor work areas to ensure they meet workplace housekeeping standards
- monitor work area to ensure they meet workplace hygiene standards. This may include:
 - removing weeds
 - removing dead or diseased plant materials
 - washing work area on transfer of plants
 - disinfecting tools, equipment and work areas
 - using foot baths on entry to different work areas
- identify, rectify and/or report problems and anomalies
- implement safe work procedures to minimise hazards
- maintain workplace records
- maintain irrigation systems. This may include:
 - fixing blockages
 - servicing irrigation system components
 - identifying and reporting faults in the irrigation system
 - fixing leaking heads and hoses
- monitor water requirements. This may include:
 - using soil moisture devices
 - checking plants for physical signs of water stress or waterlogging
- test potting media. This may include identifying:
 - pH
 - drainage
 - aeration
 - salinity
 - nitrate levels
 - water repellence
- monitor health of the vines
- apply treatments to vines. These may include:

- fungicides
- fertilisers
- insecticides
- hormones
- pruning
- hardening off
- irrigation
- monitor and/or prepare stock for dispatch. This may include:
 - labelling containers
 - checking orders against stock prepared
 - hydrating stock
- prepare, mix and use chemicals as required
- 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:

- basic vine physiology, as it applies to:
 - transpiration
 - water intake
 - nutrient uptake
 - photosynthesis
 - respiration
 - translocation
- parts of the root, trunk, shoot and fruit systems of the grapevine, their role in how the vine works and their contribution to fruit quality, including:
 - buds, nodes and tendrils
 - cambium, epidermis, phloem and xylem
 - leaf blade, bract and petiole
 - bunch, berries and flowers
- industry processes for new variety development
- key grape varieties and their distinguishing features. This may include factors, such as:
 - berry and bunch characteristics
 - frost and disease resistance
 - flavour and style
- annual grapevine growth stages, including:

- budburst
- flowering
- veraison
- maturity
- methods of calculating daily water needs
- methods for monitoring water use
- relationship between water needs of nursery plants and environmental parameters
- characteristics of various types of potting media
- tests to determine quality of potting media
- principles of nursery hygiene
- optimum growing conditions for plants in a nursery
- quality parameters for a range of nursery plants
- symptoms of unhealthy plants
- treatments required by plants at different growth stages and environmental parameters
- packing, dispatch and handling techniques of nursery plants
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- reporting and recording requirements and procedures
- procedures and responsibility for reporting problems and anomalies

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
<p>Overview of assessment</p>	<p>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.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> • use personal protective equipment, MSDS and follow other specified OHS procedures • identify environmental factors on plant growth and health • monitor and control application of water and special treatments to meet production outcomes • identify and address anomalies and problems • maintain stock levels to meet requirements • prepare stock for dispatch • complete documentation.
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • 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.
<p>Method of assessment</p>	<p>This unit should be assessed together with other units of</p>

EVIDENCE GUIDE	
	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 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	
<p>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.</p>	
Policies and procedures	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
Workplace information	<p>Workplace information can include:</p> <ul style="list-style-type: none"> • Standard Operating Procedures (SOPs) • specifications • production schedules • routine maintenance schedules • work notes • Material Safety Data Sheets (MSDS) • manufacturer instructions • product labels • integrated pest management (IPM) programs • verbal directions from manager, supervisor, or senior operator
Nursery environment	<p>Nursery environment may include:</p> <ul style="list-style-type: none"> • glasshouses • shade houses • field nurseries • hardening-off areas

RANGE STATEMENT	
Environmental parameters	Environmental parameters may include: <ul style="list-style-type: none"> • light • temperature • humidity • wind
Crop water needs	Crop water needs are determined by: <ul style="list-style-type: none"> • using water monitoring devices or physical observation
Problems and anomalies	Problems and anomalies may include: <ul style="list-style-type: none"> • evidence of pests and diseases • insufficient new roots • insufficient number of new shoots • weak graft union • signs of dehydration • changes in environmental parameters • poor equipment performance
Stock	Stock may include: <ul style="list-style-type: none"> • cuttings and rootlings
Records	Records will include: <ul style="list-style-type: none"> • date • environmental parameters • treatments applied • rate of treatments • name of operator • dispatch records

Unit Sector(s)

Unit sector	Wine operations
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