



Australian Government

FDFWGG3002A Coordinate canopy management activities

Release: 2

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Modification History

This unit supersedes and is equivalent to FDFWGGCCMA Coordinate canopy management activities.

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 identify and implement manual and automated canopy management activities.
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Application of the Unit

Application of the unit	Coordination skills required in applying this unit involve facilitating a team.
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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. Prepare for canopy management activities	1.1 Canopy management requirements are identified 1.2 Vine vigour and growth are assessed according to workplace procedures 1.3 Appropriate manual and/or automated canopy management techniques are selected 1.4 Equipment is confirmed as available and ready for use 1.5 Operators are instructed as required
2. Implement canopy management requirements	2.1 Canopy management activities are carried out according to vine vigour, growth guidelines and manager's instructions 2.2 Canopy management activities are monitored to confirm that performance is maintained within specification 2.3 Out-of-specification performance is identified, rectified and/or reported 2.4 Problems and anomalies are identified, corrected and/or reported
3. Record information	3.1 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 to identify canopy management requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- identify, rectify and/or report environmental non-compliance
- implement canopy management requirements. This may include consideration of:
 - equipment and materials required
 - personnel required
 - location
 - transport
 - timing
 - environmental operating conditions
 - other vineyard activities (e.g. spraying)
- select appropriate canopy management techniques. This will include consideration of:
 - vine vigour
 - trellis design
 - grape variety
 - quality requirements
 - climate, current and forecast weather conditions
 - vineyard terrain and aspect
 - phenological development
 - workplace procedures and manager's instructions
- monitor canopy management activities. This may include monitoring:
 - removal of unwanted growth
 - positioning of vine shoots
 - cutting procedure and quality
 - manipulation and securing of vine
 - vine damage
 - exposure of crop to sunlight
 - addition and positioning of foliage wires or shade cloth
 - correct disposal of waste
 - cleaning and storage of equipment
 - problems and anomalies
 - equipment performance and maintenance

- team performance and progress
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective actions
- maintain canopy management records according to workplace standards
- facilitate and train teams and individuals
- conduct routine maintenance of equipment according to enterprise procedures
- apply 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 include:

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:
 - water intake
 - nutrient uptake
 - photosynthesis
 - respiration, transpiration
 - 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
 - bunches, berries and flowers
- vine types, their characteristics and uses, including:
 - family, genus and species
 - *Vitis vinifera* and commercial varieties
 - native species and hybrids (e.g. *labrusca*)
 - rootstocks and scion stock
- industry processes for new variety development
- annual grapevine growth stages, including:
 - budburst
 - flowering
 - veraison
 - maturity
- key grape varieties and their distinguishing features. This may include factors, such as:

- berry and bunch characteristics
- frost and disease resistance
- flavour and style
- effects of vine canopy reduction and grape exposure on fruit and wine quality
- features and benefits of a range of manual and/or automated canopy management styles and techniques and their respective affect on grape quality, cropping yield and wine production requirements. This should include techniques to manage:
 - light penetration and shading
 - air circulation and disease reduction
 - phenological stages of vine development
 - crop quality and quantity
- factors influencing vine vigour, including:
 - grape variety
 - trellis design
 - vine spacing
 - fertilisers
 - irrigation
 - rootstock
- key factors affecting the canopy management technique adopted. These may include:
 - climate, forecast and current weather conditions
 - vineyard aspect and terrain
 - grape variety and vigour
 - grape quality and characteristics required
 - trellis design
 - harvesting techniques
 - disease risk and occurrence
 - stage of maturity and development
- recognition of correct vine growth stages at which to carry out canopy management activities
- significance and method of monitoring canopy management activities
- safe handling of equipment
- correct operating procedures for equipment
- purpose and application of personal protective clothing and/or equipment
- Occupational health and safety (OHS) hazards and controls
- identification of common problems and anomalies
- procedures and responsibility for reporting problems
- environmental issues and controls
- cleaning and storage requirements of equipment
- Reporting and recording requirements and procedures
- team facilitation and training techniques
- routine maintenance procedures for equipment where relevant
- information technology systems 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	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> • use personal protective clothing and equipment • determine requirements for canopy management according to vine vigour, growth guidelines and manager's instructions • select canopy management techniques • coordinate team activities to implement determined canopy management techniques • address problems and anomalies • complete workplace records.
Context of and specific resources for assessment	<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
Method of assessment	This unit should be assessed together with other units of competency relevant to the function or work role.

EVIDENCE GUIDE**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**

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

Equipment

Equipment may include:

- hydraulic or pneumatic pruners
- a range of secateurs
- knives
- tractor
- circular and hand saws
- cutter bars
- blades

RANGE STATEMENT	
	<ul style="list-style-type: none"> • drum pruners • mechanical leaf pluckers and wire lifters • bare hands • maintenance tools and team support equipment (e.g. toilet facilities, first aid box and spare equipment)
Unwanted growth	<p>Unwanted growth may include:</p> <ul style="list-style-type: none"> • suckers • water shoots • congested shoots • excess bunches
Canopy management systems	<p>Canopy management systems will vary with workplace requirements, but may include:</p> <ul style="list-style-type: none"> • vertically shoot positioned (VSP) • wide T • Scott Henry • single wire
Canopy management activities	<p>Canopy management activities may include:</p> <ul style="list-style-type: none"> • leaf removal • shoot removal • applying or removing shade cloth • lifting or lowering foliage wires • positioning shoots • trimming shoots • bunch thinning
Problems and anomalies	<p>Problems and anomalies include:</p> <ul style="list-style-type: none"> • signs of common pests and diseases, such as mildew, eutypa, phomopsis, boring insects, dying arm, crown gall, and diseased wood or berries • signs of trellis and/or irrigation disrepair or problems • machinery breakdown • team performance
Information systems	<p>Information systems may be:</p> <ul style="list-style-type: none"> • screen or print based and may include information technology systems, such as recording and reporting, weather forecasting, rainfall maps and infrared canopy monitoring

Unit Sector(s)

Unit sector	Wine operations
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