



Australian Government

FDFWGG3010A Implement a soil management program

Release: 2

FDFWGG3010A Implement a soil management program

Modification History

This unit supersedes but is not equivalent to FDFWGG3010B Implement a soil management program.

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. This unit covers the skills and knowledge required to monitor soil requirements and implement and evaluate a soil management program.
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Application of the Unit

Application of the unit	The application of this unit involves consultation with the manager and may require supervision of others in the implementation process.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	FDFWGG2018A	Operate vineyard equipment
	FDFWGG3001A	Apply chemicals and biological agents

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 vineyard soil management requirements	1.1 Vineyard soil is monitored according to workplace procedures 1.2 Results are interpreted correctly 1.3 Appropriate soil management activities are identified and recommended
2. Implement soil management program	2.1 Resources are coordinated and personnel briefed to deliver requirements 2.2 Agreed soil management program is implemented
3. Evaluate effectiveness of soil management activities	3.1 Vineyard is monitored to evaluate effectiveness of activities 3.2 Surrounding areas are monitored to evaluate environmental impact of soil management activities
4. Record information	4.1 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 soil management requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas
- consult with appropriate senior personnel
- apply sampling techniques
- conduct routine tests
- monitor the vineyard and interpret the results to identify vineyard soil management requirements. This may include monitoring:
 - soil moisture content
 - watertable level
 - weed population
 - signs of vine nutrient deficiencies
 - climatic conditions
 - cover crop practices
 - soil analyses (e.g. pH and salinity)
 - evidence of hard pans
 - soil texture
 - vine root distribution
 - nutrient levels in plant and soil
 - irrigation water quality
 - climatic conditions
 - erosion risk
 - soil management history
 - growth of mid-row sward
- calculate application rates for soil addition requirements (e.g. fertilisers and ameliorants)
- present and justify recommendations to senior personnel
- implement the soil management program. This will include consideration of:
 - resources, including operators with appropriate skills
 - equipment availability and capability
 - materials and chemicals
 - maintenance programs and supplies
 - specific needs of individual blocks

- environmental conditions
- other vineyard activities
- instruct operators as required
- monitor soil management activities. This will include monitoring:
 - operator performance
 - operating conditions
 - operating results
 - material supplies
 - equipment performance
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record problems and/or corrective action
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- maintain work area to meet housekeeping standards
- report and/or record problems according to instructions
- plan and organise
- supervise operators 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 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:

- ideal soil environment for vines plus specific requirements of grapes grown
- soil management techniques and their affect on soil, vine growth, cropping levels and wine quality
- visual signs of vine nutrient deficiencies
- sampling techniques and procedures
- routine testing techniques and procedures
- interpretation of routine tests
- Occupational health and safety (OHS) hazards and controls
- environmental issues and controls
- procedures and responsibility for reporting problems
- resource requirements and availability
- reporting and recording requirements and procedures
- consultation requirements and procedures
- supervision techniques where relevant

- information technology systems where relevant
- resources required for assessment where relevant

Evidence Guide

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 may include:

- Standard Operating Procedures (SOPs)
- specifications
- soil management programs
- instructions
- routine maintenance schedules
- work notes
- Material Safety Data Sheets (MSDS)
- manufacturer instructions
- verbal directions from manager or supervisor

Monitoring activities

Monitoring activities may include:

- drainage
- soil moisture, pH and texture
- watertable levels
- rainfall
- vine and soil nutrient deficiencies
- weeds
- air temperatures

Area management

Area managed may not be limited to the area under vines. Adjacent or ecologically linked landscapes may require management or consideration, and may include:

- woodlots
- seepage areas
- waterways
- landcare sites
- revegetation sites
- windbreaks
- neighbouring vineyards and other primary production

RANGE STATEMENT**Soil management activities**

Soil management activities may include, but are not limited to:

- the addition of ameliorants and fertilisers
- cover cropping
- mulching
- cultivating
- slashing
- tilling
- ploughing
- weeding
- spraying
- frost management

Information systems

Information systems may be:

- print or screen based

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RANGE STATEMENT	
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Area management	Area managed may not be limited to the area under vines. Adjacent or ecologically linked landscapes may require management or consideration, and may include: • woodlots • seepage areas • waterways • landcare sites • revegetation sites • windbreaks • neighbouring vineyards and other primary production
Soil management activities	Soil management activities may include, but are not limited to: • the addition of ameliorants and fertilisers • cover cropping • mulching • cultivating • slashing • tilling • ploughing • weeding • spraying • frost management
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Unit Sector(s)

Unit sector	Wine operations
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