



Australian Government

FBPVIT3012 Implement an irrigation schedule

Release: 1

FBPVIT3012 Implement an irrigation schedule

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to monitor soil requirements and implement and review a vineyard irrigation schedule.

The unit applies to individuals who are required to follow workplace procedures in completing tasks associated with implementing irrigation schedules, and take responsibility for their own work using discretion and judgement in the selection and use of available resources.

All work must be carried out to comply with workplace procedures according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Viticulture (VIT)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Monitor vineyard for irrigation requirements	1.1 Monitor vineyard to assess requirements for water and/or nutrients 1.2 Collect routine samples according to workplace procedures 1.3 Test samples, in line with workplace procedures 1.4 Interpret test results and identify irrigation activities to match

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements
2. Implement irrigation requirements	2.1 Plan irrigation activities and schedule, including nutrient injection and application rates 2.2 Coordinate resources and brief personnel to deliver irrigation requirements 2.3 Implement agreed irrigation plan 2.4 Address problems and anomalies in the irrigation system as required
3. Evaluate effectiveness of irrigation activities	3.1 Monitor vineyard to evaluate the impact of irrigation activities 3.2 Monitor surrounding areas to evaluate the environmental impact of irrigation activities 3.3 Evaluate the overall effectiveness of the irrigation activity 3.4 Record irrigation activity according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Numeracy	- Accurately mix chemicals according to specified ratios - Measure and adjust flow rates - Measure soil moisture, nutrient and chemical output
Get the work done	Plan, sequence and implement tasks according to set routines and procedures

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status

FBPVIT3012 Implement an irrigation schedule	FDFWGG3007A Implement an irrigation schedule	Updated to meet Standards for Training Packages Prerequisite removed Minor changes to Elements and Performance Criteria to clarify outcomes Foundation skills added	Equivalent unit
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Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPVIT3012 Implement an irrigation schedule

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit. There must be evidence that the individual has implemented an irrigation schedule for at least one vineyard, or part of, including:

- determining requirements for water and nutrients
- planning an irrigation schedule
- implementing the irrigation plan and addressing problems and anomalies
- evaluating the effectiveness of the irrigation schedule.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- effect of irrigation techniques on vine growth, cropping levels and wine quality, including partial root zone drying (PRD) and regulated deficit irrigation (RDI)
- effect of water and additives on vines during different key phenological stages
- visual symptoms of vine nutrient deficiencies, water stress and frost
- principles of soil moisture monitoring, including volumetric soil moisture content, and percentage compared to soil moisture tension
- factors to be considered when planning irrigation, including:
 - soil moisture content
 - water table level
 - water quality
 - signs of vine nutrient deficiencies
 - climatic conditions
 - frost risk
 - grape variety
 - soil type and depth
 - closeness to harvest

- yield parameters
- age of vine
- grape quality requirements
- symptoms of vine water stress
- effective root depth
- methods to calculate chemical application rates for injection requirements
- sampling and testing techniques typically used in a vineyard
- issues to be monitored and corrected:
 - measuring nitrogen output
 - measuring chlorine output
 - identifying soil moisture content and depth to which water will reach
 - identifying emitter output consistency
 - interaction between different irrigation valves or shifts
- recording requirements and procedures
- information technology systems where relevant.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - irrigation equipment
 - irrigation site
 - sampling and testing equipment
- specifications:
 - work instructions and schedules
 - manufacturer instructions for equipment
 - safety data sheets for chemicals.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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