



Australian Government

FDFWGG2020A Carry out hot water treatment

Release: 2

FDFWGG2020A Carry out hot water treatment

Modification History

This unit supersedes and is equivalent to FDFWGGHWTB Carry out hot water treatment.
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 carry out hot water treatment of grape vine cuttings.
------------------------	--

Application of the Unit

Application of the unit	Working with vine cuttings includes the ability to recognise problems and anomalies with vines. People undertaking this unit of competency in the workplace will require accreditation by the <i>Australian Vine Improvement Association (AVIA)</i> .
--------------------------------	---

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains employability skills.
----------------------	--

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 hot water treatment	1.1 Work instructions on hot water treatments are confirmed and understood 1.2 Materials are confirmed as available and ready to meet requirements 1.3 Equipment is set up according to specifications 1.4 Water is prepared for cool down, hot water treatment and hydration according to specifications 1.5 Potential and existing hazards are identified, rectified and/or reported according to workplace procedures
2. Treat cuttings	2.1 Cuttings are dipped in the hot water according to AVIA protocols 2.2 The dipping process is monitored for compliance with AVIA specifications 2.3 Safe work procedures are followed to minimise risk of hazards
3. Carry out post-treatment procedures	3.1 Cuttings are cooled down according to AVIA protocols 3.2 Treated cuttings are stored according to AVIA and workplace procedures 3.3 Waste is collected and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
4. Record information	4.1 Treatment information is recorded according to AVIA requirements

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 carry out hot water treatments
- confirm supply of necessary materials
- liaise with other work areas
- select, fit and use appropriate personal protective clothing and/or equipment
- select, operate, maintain and store required equipment according to instructions
- maintain work area and equipment to meet workplace housekeeping standards
- maintain work area and equipment to meet workplace hygiene standards
- use appropriate cleaning techniques
- recognise problems and anomalies and correct and/or report them as instructed
- identify, rectify and/or report environmental non-compliance
- maintain workplace records
- set up equipment for hot water treatment. This will include:
 - placing correct volumes of water in the tanks
 - calibrating data loggers
 - calibrating temperature sensors against a certified thermometer
 - calibrating thermometers
- prepare water for cool down, hot water treatment and hydration. This will include:
 - testing and adjusting chlorination levels
 - checking and adjusting temperature levels
- prepare cuttings for treatment. This may include re-hydration
- dip cuttings, fully submersing for the specified amount of time, at the specified temperature in prepared hot water
- monitor the dipping process to ensure compliance with required specifications. This will include:
 - monitoring critical control points for compliance with specifications
 - analysing readouts from data logging devices
 - maintaining level of agitation in the tanks
 - maintaining chlorine level
 - recalibrating thermometers
- cool down cuttings in prepared cooling water immediately following hot water treatment. this is already mentioned above
- store treated cuttings. This will include:
 - separating from untreated cuttings to prevent contamination

- covering with clean covers
- placing cuttings in vented plastic bags to prevent dehydration
- placing cuttings in the cold room
- dispose of waste. This may include:
 - settling the water
 - racking off clean water
- 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

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:

- purpose of hot water treatment
- importance of precise treatment
- consequences of mistreatment
- AVIA and workplace specifications for hot water treatments
- reasons for using different specifications for hot water treatments
- monitoring techniques to ensure temperature and water quality are within specifications
- quality assurance process for the hot water treatment process
- Occupational health and safety (OHS) hazards and controls when undertaking hot water treatments
- purpose and application of personal protective clothing and/or equipment
- correct operating procedures for equipment
- safe and effective handling of equipment
- principles of nursery hygiene
- cleaning requirements and procedures for work area and equipment
- environmental issues and controls
- waste disposal requirements and procedures
- reporting and recording requirements and procedures
- procedures and responsibilities for reporting problems and anomalies.

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 clothing and equipment where required • follow hot water treatment safety procedures • apply AVIA standards to heat and cool cuttings • handle cuttings according to instructions • recognise vine problems • dispose of waste according to instructions • maintain required records.
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.

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
- routine maintenance schedules
- work notes
- manufacturer instructions
- verbal directions from manager or supervisor

Equipment

Equipment may include:

- hydration tanks
- treatment tanks
- cooling-off tanks
- dipping apparatus
- electronic data logging devices
- monitoring apparatus
- certified reference thermometer
- dipping cages
- appropriate personal protective clothing and/or equipment

RANGE STATEMENT	
	• forklift
Materials	Materials may include: • cuttings • rootlings • water • chlorine
Waste	Waste may include: • water • damaged plant material • sediment
Hazards	Hazards may include: • heat sources • hot water • transferring vines • moving machinery • chlorine
Specifications	Specifications will include: • temperature range • length of time in a treatment • relative humidity • level of chlorination • amount of agitation required • quality of the water
Records	Records will include: • data logger print out • batch number • date of treatment • start and finish time of treatment • maximum temperature for treatments and cold room • minimum temperature for treatments and cold room • average temperatures for treatments and cold room • calibration information • name of operator

Unit Sector(s)

Unit sector	Wine operations
--------------------	-----------------