



**Australian Government**

# **FDFWGG2001A Bench graft vines**

**Release: 2**

## FDFWGG2001A Bench graft vines

### Modification History

This unit supersedes and is equivalent to FDFWGGBGVB Bench graft vines.  
April 2012: Minor typographical corrections.

### Unit Descriptor

<b>Unit descriptor</b>	This specialist unit has been developed for the wine grape growing stream of the wine sector. It covers the skills and knowledge required to select appropriate vine material and bench graft vines.
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### Application of the Unit

<b>Application of the unit</b>	This unit applies to wine grape growing and covers the bench grafting of vines. The unit includes the selection of appropriate vine material, preparation of cuttings, grafting and post-grafting treatment and storage.
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Not applicable.

## Employability Skills Information

<b>Employability skills</b>	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

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Prepare to bench graft vines	1.1 Materials are confirmed as available to meet grafting requirements 1.2 Cuttings are selected and prepared for grafting 1.3 Equipment is checked to confirm readiness for use 1.4 Equipment is set to meet grafting needs as required
2. Bench graft vines	2.1 Cuttings are disbudded according to workplace procedures 2.2 Cuttings are bench grafted according to workplace procedures 2.3 Graft is treated and/or taped according to workplace procedures 2.4 Grafting process and equipment are monitored to ensure results are maintained within specifications 2.5 Out-of-specification process and equipment performance are identified, rectified and/or reported
3. Complete bench grafting activities	3.1 Equipment is shut down, cleaned and maintained as required 3.2 Grafted vines are packed, labelled and stored according to instructions 3.3 Waste generated by both the process and cleaning procedures is collected, treated and disposed of according to workplace procedures 3.4 Work is conducted in accordance with workplace environmental guidelines
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:

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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 grafting requirements
- select, fit and use appropriate personal protective clothing and/or equipment
- liaise with other work areas and customers
- confirm supply of necessary materials
- select appropriate vine material for grafting. This may include consideration of:
  - variety and clone
  - matching cambium
  - matching bevels and sizes
  - wood diameters
  - customer or workplace requirements
- prepare vine material for grafting. This may include:
  - removal from cold storage
  - soaking
  - heat treatment
  - disbudding
  - hydration
  - grading
- select, prepare and set equipment as required
- operate equipment
- disbud vines according to instructions
- bench graft vines to match specifications
- treat vines after grafting. This may include:
  - packing into callusing boxes
  - hormonal treatment
  - careful handling
  - following hygiene procedures
- monitor the process and equipment operation to identify out-of-specification results or non-compliance. This may include monitoring:
  - tightness of graft union
  - progress (e.g. number per day)
- take corrective action in response to out-of-specification results or non-compliance
- report and/or record corrective action as required

- sort, collect, treat, recycle or dispose of waste as required
- maintain work area to meet housekeeping standards. This should include hygiene requirements to prevent cross-infection
- clean equipment as required
- pack, label and store grafted vines. This may include consideration of:
  - cold room layout
  - cold room temperature variations
  - customer requirements
  - storage time requirements
  - care of vine material (e.g. moisture and disease)
- identify, rectify and/or report environmental non-compliance
- conduct routine maintenance of equipment 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.

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**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:**

- purpose of grafting and various methods of budding and grafting
- purpose and methods of disbudding
- criteria for successful grafting
- importance of selection and use of rootstock and Vinifera
- advantages of using clonal and registered vine improvement rootstock material
- criteria for selecting parent vines for scion material
- procedures and optimum conditions for the storage of material until required for grafting
- stages of the grafting procedure and their purpose
- common problems and corrective action required
- hygiene requirements and procedures
- purpose and components of grafting equipment
- operating procedures for grafting equipment
- methods of callusing vine cuttings and the criteria for best callus development
- procedures and responsibility for reporting problems
- environmental issues and controls
- cleaning requirements and procedures for work area and equipment
- reporting and recording requirements and procedures
- routine maintenance procedures for equipment 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"> <li>• select and prepare appropriate vine material for grafting including disbudding</li> <li>• undertake bench grafting of vines to instructions</li> <li>• post-grafting treatment and packing of vines is to instructions</li> <li>• monitor grafted vines and out of specification grafted vines identified and rectified or reported</li> <li>• follow personal and work area hygiene procedures</li> <li>• dispose of waste correctly</li> <li>• record and report results of grafting according to procedures.</li> </ul>
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"> <li>• personal protective clothing and equipment as required</li> <li>• work procedures, including advice on company practices, safe work practices, food safety, quality and environmental requirements</li> <li>• instructions, information, specifications and schedules as required</li> <li>• equipment, services and corresponding information as required</li> <li>• products and materials as required</li> <li>• internal and external customers and suppliers as required</li> <li>• cleaning procedures, materials and equipment as required</li> <li>• documentation and recording requirements and procedures.</li> </ul>

<b>EVIDENCE GUIDE</b>	
Method of assessment	This unit should be assessed together with other units of 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

<b>RANGE STATEMENT</b>	
<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>	
<b>Policies and procedures</b>	Work is carried out in accordance with workplace procedures, licensing requirements and legislative requirements
<b>Workplace information</b>	<p>Workplace information can include:</p> <ul style="list-style-type: none"> <li>• Standard Operating Procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules</li> <li>• instructions</li> <li>• routine maintenance schedules</li> <li>• work notes</li> <li>• Material Safety Data Sheets (MSDS)</li> <li>• manufacturer instructions</li> <li>• verbal direction from manager, supervisor or senior operator</li> </ul>
<b>Grafting methods</b>	<p>Grafting methods may include:</p> <ul style="list-style-type: none"> <li>• T buds</li> <li>• Chip</li> <li>• Wedge</li> <li>• side bark</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• V</li> <li>• omega</li> </ul>
<b>Equipment</b>	<p>Equipment may include:</p> <ul style="list-style-type: none"> <li>• secateurs</li> <li>• grafting knife</li> <li>• grafting machine</li> <li>• vermiculite boxes</li> <li>• gloves</li> <li>• budding tape</li> </ul>
<b>Grafting seals</b>	<p>Grafting seals may include:</p> <ul style="list-style-type: none"> <li>• tape</li> <li>• fungicides</li> <li>• paint</li> <li>• wax</li> </ul>
<b>Materials</b>	<p>Vine material may include:</p> <ul style="list-style-type: none"> <li>• rootstock</li> <li>• scion</li> <li>• rootlings and cuttings (at various sizes)</li> </ul>
<b>Information systems</b>	<p>Information systems may be:</p> <ul style="list-style-type: none"> <li>• print or screen based</li> </ul>
<b>Confirming equipment status</b>	<p>Confirming equipment status will include:</p> <ul style="list-style-type: none"> <li>• checking that safety standards and pre-start requirements are met and that equipment is operational</li> </ul>

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## Unit Sector(s)

<b>Unit sector</b>	Wine operations
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