

U16002

Propagate plants by vegetative methods

Unit Descriptor:

This unit sets the standard for anyone whose role it is to propagate plants using vegetative methods. You will be required to collect, prepare and establish plants in a growing environment. You will be working in accordance with instructions from a supervisor or manager.

The first element covers the collection of propagation material. This will involve the use of a variety of equipment such as secateurs and storage containers. The collected material must meet the requirements of the propagating programme, and be correctly stored ready for use.

The second element is about preparing the propagation material. The propagation methods used may include: cuttings, division, budding and grafting. Preparation will include trimming and preparation of stocks.

The third element covers establishing the propagation material in a growing environment. Activities necessary to sustain and promote plant development may include; watering, temperature and humidity control, removal of diseased material.

ELEMENT**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

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| 1. Collect propagation material | 1.1 Use and maintain equipment in a safe, clean and effective condition throughout. |
| | 1.2 Correctly identify plants from which material is to be collected. |
| | 1.3 Handle plant material in a manner which minimises damage and wastage. |
| | 1.4 Ensure the method used for collecting the propagation material is in accordance with instructions. |
| | 1.5 Ensure the collected material meets the requirements of the propagating programme. |
| | 1.6 Store collected material in accordance with instructions. |

- 1.7 Ensure working methods promote health and safety, and are consistent with relevant legislation and codes of practice.
- 1.8 Ensure records are accurate, legible and complete.
2. Prepare propagation material
 - 2.1 Prepare and maintain the necessary **equipment** in a fit state for use.
 - 2.2 Handle plant material in a manner which minimises damage and wastage, and optimises growth.
 - 2.3 Use **equipment** and materials in a safe and correct manner.
 - 2.4 Use a suitable **propagation method**.
 - 2.5 **Prepare and treat propagation material** and growing media in accordance with instructions.
 - 2.6 Ensure working methods promote health and safety, and are consistent with relevant legislation and codes of practice.
 - 2.7 Ensure records are accurate, legible and complete.
 - 2.8 Handle and dispose of waste safely and correctly in accordance with relevant legislation and organisational requirements.
3. Establish propagation material in a growing environment
 - 3.1 Prepare and maintain the necessary equipment and materials for the work in a fit state for use.
 - 3.2 The required rotting medium is prepared in accordance with instructions.
 - 3.3 Handle plant material in a manner which minimises damage and wastage, and optimises growth.

- 3.4 Position propagation material in the required rooting medium in accordance with instructions.
- 3.5 Place propagation material in the correct growth environment in accordance with instructions.
- 3.6 Complete activities to sustain and **promote plant development** after propagation in accordance with instructions.
- 3.7 Ensure working methods promote health and safety, and are consistent with relevant legislation and codes of practice.
- 3.8 Keep records accurate, legible and complete.

RANGE STATEMENT

You must cover the items below:

Element 1: Collect propagation material

A. Maintain the following equipment: (*Also applies to element 2*)

- (i) cutting equipment
- (ii) containers for storage and transport of material

Element 2: Prepare propagation material

A. Use two of the following propagation methods:

- (i) cuttings
- (ii) budding
- (iii) grafting
- (iv) micro-propagation
- (v) division

B. Prepare propagation material in at least one of the following ways:

- (i) trimming of cuttings
- (ii) trimming of divisions
- (iii) trimming of scions

C. Use at least **one** of the following forms of **treatment**:

- (i) root dipping
- (ii) dipping cuttings
- (iii) tying buds or grafts

Element 3: Establish propagation material in a growing environment

A. **Promote plant development** using **all** of the following:

- (i) watering
- (ii) temperature/ humidity modification
- (iii) light control
- (iv) control of pests and diseases
- (v) manage nutrients application

UNDERPINNING KNOWLEDGE AND SKILLS

1. The maintenance and safe use of equipment.
2. The type(s) of crop(s) which is/are produced within your enterprise.
3. Where and how to obtain information on plants and plant identification.
4. The full botanical names of relevant plants.
5. The ways in which plant material should be handled.
6. Instructions for collecting propagation material.
7. Methods(s) for collecting propagation material and the requirements of the propagating programme.
8. Methods of storing the material prior to use.
9. Length of storage which is suitable.
10. Health and safety requirements during work activities.
11. The records which must be completed.
12. The maintenance, preparation and safe use of equipment.
13. Instructions for preparing propagation material.
14. Methods used for preparing cuttings and division.
15. Methods used in budding and grafting.
16. Why vegetative methods are used.
17. Methods used in treating prepared propagation material.

18. The need for hygiene throughout the propagating process.
19. Instructions for preparing rooting medium and establishing propagation material.
20. The types of rooting media in use within the enterprise.
21. Correct positioning of propagation material in rooting medium.
22. The types of growing and rooting environments in use.
23. The safe and correct use of agro chemicals.

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

Assessment should involve observation of you collecting propagation material, preparing propagation material and establishing propagation material in a growing environment.

A representative range of crops produced in the working environment should be propagated. This **MUST** include all aspects stated in the range. Post-propagation activities include, for example, until potting of rooted cuttings or establishment of graft unions.

You are expected to:

A Maintain the following equipment:

- (i) cutting equipment
- (ii) containers for storage and transport of material

B Use **two** of the following **propagation methods**:

- (i) cuttings
- (ii) buddings
- (iii) grafting
- (iv) micro-propagation
- (v) division

C **Prepare propagation material** in at least **one** of the following ways:

- (i) trimming of cuttings
- (ii) trimming of divisions
- (iii) preparation of stocks
- (iv) trimming of scions

D Use at least **one** of the following forms of **treatment**:

- (i) root dipping
- (ii) dipping cuttings
- (iii) tying buds or graft

E **Promote plant development** using **all** of the following:

- (i) watering
- (ii) temperature/humidity modification
- (iii) light control
- (iv) control of pests and diseases
- (v) manage nutrients application

Use of equipment, chemical and all other activities must meet the requirements of the law and relevant codes of practice.

(2) Methods of Assessment

Observation by your assessor of you:

- Using and maintaining equipment in a safe, clean and effective condition throughout
- Correctly identifying plants from which material is to be collected
- Handling plant material in a manner which minimises damage and wastage
- Ensuring the method used for collecting the propagation material is in accordance with instructions
- Preparing and treating propagation material in accordance with instructions
- Preparing the required rooting medium in accordance with instructions
- Positioning propagation material in the required rooting medium in accordance with instructions
- Placing propagation material in the correct growing environment in accordance with instructions
- Completing activities to sustain and promote plant development after propagation in accordance with instructions.

Answers to written or oral questions from your assessor.

(3) Context of Assessment

Evidence from simulations is **not** acceptable for this unit.