



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **RTC2026A Undertake propagation activities**

**Release: 1**

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### **Modification History**

Not applicable.

### **Unit Descriptor**

This competency standard covers the process of plant propagation undertaken in enterprises involved in plant propagation and production. Competency is demonstrated by the application of knowledge and skills to a range of propagation tasks, such as preparing parent plant stock, collecting propagation materials, pre-planting treatments and basic plant propagation techniques. This unit does not include budding and grafting. The work is carried out within routine methods and procedures under supervision with intermittent checking. Responsibility for some roles and coordination within a team may be required.

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### **Application of the Unit**

Not applicable.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

Not applicable.

### **Elements and Performance Criteria Pre-Content**

Not applicable.

# Elements and Performance Criteria

## Elements and Performance Criteria

Element	Performance Criteria
1 Prepare for plant propagation	<p>1.1 <b>Workplace information</b> is interpreted and clarified according to instructions.</p> <p>1.2 <b>OHS hazards</b> in the work area are identified, rectified and/or reported.</p> <p>1.3 Suitable <b>personal protective equipment</b> (PPE) is selected, used, maintained and stored.</p> <p>1.4 <b>Tools and equipment</b> appropriate to the task being undertaken are selected and prepared according to enterprise guidelines.</p> <p>1.5 Propagation material is <b>collected</b> using the appropriate method for the species and according to enterprise guidelines.</p> <p>1.6 Propagation material is <b>maintained and stored</b> to ensure maximum viability.</p>
2 Propagate plants	<p>2.1 <b>Pre-treatment</b> is applied and/or carried out appropriate to the propagation method and species.</p> <p>2.2 Propagation techniques are carried out according to the requirements of the species.</p> <p>2.3 Propagation material is handled in a way that minimises damage and maximises viability.</p> <p>2.4 Water and nutrients are applied to suit the media conditions, plant requirements and <b>propagation techniques</b> employed.</p> <p>2.5 <b>Labels</b> are applied according to enterprise guidelines.</p> <p>2.6 Plant health is monitored and <b>remedial action</b> is taken according to enterprise guidelines.</p> <p>2.7 Propagation activities are carried out according to <b>OHS requirements</b>.</p>

- 3 Complete propagation activities
  - 3.1 **Records** are completed accurately and at the required time according to enterprise guidelines.
  - 3.2 Tools and equipment are cleaned and stored according to manufacturer specifications and enterprise guidelines.
  - 3.3 **Waste** is removed and **hygiene practices** are followed according to enterprise and OHS requirements.

## Required Skills and Knowledge

Not applicable.

## Evidence Guide

### What evidence is required to demonstrate competence for this standard as a whole?

Competence in undertaking propagation activities requires evidence that basic propagation activities can be performed in such a manner as to satisfy the workplace or client requirements. Skills involving hygiene practices (disinfestation) and must also be evident. The skills and knowledge required to undertake propagation activities must be **transferable** to a different work environment. For example, this could include different species, plant types, environments and propagation techniques.

### What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

Maintenance requirements of tools and equipment used for propagation.

OHS requirements of employees.

Quality specifications/characteristics of a range of parent plants and propagation materials.

Basic plant nutrition.

Record keeping relevant to the work function.

Enterprise requirements for handling and disposal of nursery wastes.

Enterprise hygiene requirements.

Common problems that may occur while performing propagation activities in a controlled environment.

Propagation methods required for a range of plants.

OHS legislative requirements and Codes of Practice.

OHS procedures.

**What specific skills are needed to achieve the performance criteria?**

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

Read and interpret instructions.

Participate in teams and contribute to team objectives.

Communicate effectively with fellow team members.

Carry out a variety of propagation techniques.

## What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

1. How can **communication of ideas and information (1)** be applied?

Ideas and information relating to work issues, completion and problems encountered, may need to be reported or discussed with the supervisor and others in the work team.

2. How can **information be collected, analysed and organised (1)**?

Work instructions, such as the daily planting program, should be located, interpreted and applied, with further clarification sought as necessary. Information relating to propagation activities, such as production statistics, should be noted and recorded at the completion of work tasks.

3. How are **activities planned and organised (1)**?

Undertaking propagation activities involves organising equipment and materials for plant propagation, and planning activities around daily work routines. Discussions with the supervisor and other team members may be required in order to complete tasks efficiently in a logical sequence and in a timely manner.

4. How can **team work (1)** be applied?

Propagation activities may involve working with other members of the work team to coordinate operations. For example, the collection and preparation of equipment and planting materials may be organised with another team member who acts in a support capacity.

5. How can the use of **mathematical ideas and techniques (1)** be applied?

Skills in counting, tallying and estimation are required to calculate basic production statistics, quantities and personal production rates.

6. How can **problem-solving skills (1)** be applied?

Problems relating to propagation activities may arise during daily work routines that

require corrective action or consultation with supervisor.

7. How can the **use of technology (1)** be applied?

Technology may be applied in the use of heat sterilisation equipment and computer databases and calculators.

**Are there other competency standards that could be assessed with this one?**

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to both the **Assessment Guidelines** and the relevant **Sector Booklet**.

## Range Statement

### Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in particular training and assessment requirements may depend on the work situations available

What **workplace information** may be relevant when undertaking propagation activities?

Planting program, Production Statistics, Standard Operating Procedures (SOPs), specifications, work notes, Material Safety Data Sheets (MSDSs), Nursery Industry Accreditation Scheme of Australia (NIASA) Guidelines, manufacturers instructions, product labels, or verbal directions from manager, supervisor, or senior operator.

What **OHS hazards** may be identified in the work area?

Hazards may include manual handling, hazardous substances, moving equipment and vehicles, sharp hand tools, solar radiation, slippery or uneven surfaces, and insect and spider bites.

What **personal protective equipment (PPE)** may be needed to undertake propagation activities?

Personal protective clothing and equipment may include respirators, overalls, boots, gloves, sun hat and sunscreen lotion.

What **tools and equipment** may be required for supporting propagation activities?

Tools and equipment may include secateurs, knives and other cutting instruments, plastic containers and trays, wheelbarrow, trolley, mechanical trolley, shovel, water spray container, dibblers and rubbish bins.

How might propagation materials be **collected**?

Collection procedures for propagation materials may include taking leaf or stem or root cuttings, gathering seeds, lifting bulbs, and dividing clumps.

What **maintenance and storage** procedures may apply to collected propagation materials?

Maintenance and storage procedures may include controlling environmental parameters such as moisture, air, humidity and temperature by methods such as refrigeration, wrapping in wet hessian or plastic, drenching, placing in water and burying in sawdust or other media.

What **pre-treatments** may be relevant to this standard?

Pre-treatments may include hormones, fungicides, cold/moist stratification, rehydration, heat or chemical disinfestation, breaking seed coat, cleaning, division and

	sterilisation.
What <b>propagation techniques</b> may be relevant to this standard?	Propagation techniques may include seed - (small seed sown in modules and pricked out or sown in seedbeds by hand), cuttings - (hardwood stem, semi-ripe stem, leaf, root), simple layering, growing on tissue-cultured plants, division or splitting, spores.
What <b>label</b> information may be required when propagating plants?	Label information may include date of propagation, species, variety, batch number and cultivar, treatments applied, strike rate.
What <b>remedial action</b> may be taken to control pests and diseases?	Remedial action may include applying preventative fungicides, fertilisers, removing and disposing of damaged plant material, irrigation.
What <b>OHS requirements</b> apply to this standard?	OHS requirements may include identifying hazards, assessing and reporting risks, cleaning, maintaining and storing tools and equipment, appropriate use of personal protective equipment including sun protection, safe operation of tools and equipment, safe handling, use and storage of chemicals and hazardous substances, correct manual handling; basic first aid, personal hygiene and reporting problems to supervisors.
What <b>records</b> may need to be maintained in regard to propagation activities?	Records may include date of propagation, type of propagation carried out, number of plants carried out, source of propagation material, treatments carried out, spray records
What <b>waste</b> may be relevant to this standard?	Waste may include unused propagation material, potting media wastage, damaged plants, and damaged pots.
What <b>hygiene practices</b> may apply to this standard?	Hygiene practices may include removing all dirt and organic matter from production surfaces, tools and equipment, disinfecting production surfaces, tools and equipment, disinfestation and removal of plant and media waste, hand washing, footbaths, access restrictions and handling practices which minimise cross contamination.

For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.

## **Unit Sector(s)**

Not applicable.