

Undertake Propagation Activities



Learning Guide

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Student name:.....

Student number:.....

INTRODUCTION

Welcome to *Undertake Propagation Activities*. You might need to be able propagate plants in wholesale or retail nursery work or when doing revegetation or landscaping work. This could be when you are working for your council, doing ranger work or when managing your own country. Training should be completed on the job in a plant nursery over an extended period of time.

This learning guide covers information on how to collect propagation material and propagate plants by the most common methods – by seed, cuttings, division and layering.

EQUIPMENT REQUIRED

To complete this training you will need the following:

1. Appropriate Personal Protective Equipment (PPE).
2. Safety gear including first aid kit and water.
3. A range of seeds, and parent plants to take cuttings from or to divide up.
4. Hand tools such as secateurs, spades, forks, dibble sticks and trowels.
5. Pots and trays, potting mix ingredients, rooting hormone, labels and pencils.

ASSIGNMENTS

There are three assignments you will need to complete.

Some of these assignments may go towards your final assessment.



It is recommended you undertake Pot Up Plants and Tend Nursery Plants after finishing Undertake Propagation Activities.

Section	Assignment	Competent (C) Not yet competent (NYC)	Date Achieved
Getting Prepared	Assignment 1. Project Risk Assessment		
Propagate Plants	Assignment 2. Cuttings		
Finishing Up	Assignment 3. Propagate by Seed		

1A. COLLECTING INFORMATION

Information about propagating plants can be obtained from many sources. There are some excellent books available that will help you (see References on page 25).

There is also information available online.

1. The Nursery and Garden Industry Association has lots of resources including useful publications and a link to the Nursery and Garden Industry Northern Territory.



www.ngia.com.au

2. Information specific to horticulture in the NT can be found at the Northern Territory Horticultural Association.



www.ntha.com.au

3. For Australia wide information and resources on plant propagation try the Greening Australia web site.



www.greeningaustralia.org.au

1B. PROPAGATING PLANTS SAFELY

There are some dangers associated with propagating plants. It is important that you be aware of potential dangers so you can avoid getting injured or sick.

Personal Protective Equipment (PPE) will help protect you from serious injury, but no amount of PPE will protect you from bad workplace actions. Always follow workplace guidelines and your trainer's directions.

Some of the things you can do to keep yourself safe include:

1. Wear thick gardening or rubber gloves.
2. Wear appropriate clothes for outdoors and in wet weather wear waterproof clothing.
3. Wear protective footwear at all times, in some situations you may need rubber boots.
4. Wear a hard hat if collecting seeds and propagation material from trees.
5. Watch out for snakes, spiders, wasps and other insects when collecting propagating material.
4. Keep safe distances away from other workers around hand tools.
5. Learn how to maintain and use hand tools correctly to avoid injury.
6. Always lift heavy objects correctly to avoid injuring your back (see Resource 1 for correct lifting procedures).
5. Know where your first aid kit is stored and make sure someone has a first aid certificate.



RISKS WHEN HANDLING POTTING MIXES

The handling of potting mixes requires special care to protect yourself from getting sick.

Some potting mixes contain a harmful bacteria called Legionella. The bacteria can cause Legionellosis, a type of pneumonia (this is not Legionnaires disease which is caused by a different Legionella bacteria found in air conditioner cooling towers).

To reduce the risk of infection when handling potting mixes follow these recommendations:

1. Handle all mixes with care to avoid breathing in dust.
2. Moisten the mix to avoid creating dust.
3. Wear suitable PPE to avoid contact with skin and eyes – gloves, dust mask, protective eyewear.
4. Avoid transferring the potting mix from hand to mouth – wash your hands before smoking, eating or drinking, even if you wore gloves.
5. Wash work clothes regularly.
6. Clean work area by wet-sweeping or vacuuming.
7. Seal any opened bags or containers after use and store in a cool location.

SAFE USE OF CHEMICALS

The use of chemicals (such as fertilisers) when carrying out any propagation work requires some extra special precautions.

Keep all chemicals locked in an appropriate chemical cabinet. Only people with the right training should use chemicals.

The following PPE should be considered when using chemicals.

1. PVC or chemical resistant gloves.
2. Goggles or protective glasses – protect your eyes as they easily absorb chemicals (a full face shield is needed for mixing some concentrated chemicals).
3. Dust mask or respirator – prevents the inhalation of dangerous chemicals.
4. Cotton hat – protects the head from chemicals and can be washed clean after each use.
5. Rubber boots – prevents spray getting onto your feet – the overalls should cover the outside of the boots so drips don't run down the inside of the boot.
6. Cotton overalls – suitable for general chemical work and will protect work clothes underneath – wash after each use or use disposable overalls.
8. PVC apron – used to protect clothing when mixing concentrated chemicals (a PVC suit may be necessary for some dangerous chemicals).



Legionella bacteria infects the lungs when breathed in. Symptoms of Legionella infection include: fever, dry cough, breathlessness and chest pain. Other things in the potting mix can also cause lung irritation, asthma, hay fever, inflamed nose and throat – even more reason to be careful.



1 – GETTING PREPARED

Before you begin, use this checklist to confirm you have followed good safety procedures and have all the right resources.

SAFETY CHECKLIST ACTIVITY		✓
Long trousers, shirt and boots		
Hat and gloves		
Sunscreen, insect repellent and sunglasses		
Dust mask		
Additional PPE as needed		
Water		
First aid kit		



1C. WHY PROPAGATE PLANTS

You might want to propagate native plants (rather than buy in plants from a nursery) for many reasons including:

- Flora and fauna conservation.
- Genetic conservation and the maintenance of local provenance.
- Local varieties may grow better in local conditions.
- Cost.
- To preserve the local character of an area.
- Education.
- Pleasure.

1D. TOOLS AND SUPPLIES

Using the correct tools will make propagation easier and will help to keep you free from injury.

Tick off the items you think you will need for your propagation activity.

ACTIVITY



Buckets			Trowel		
Bleach			Dibble stick (can use an ice cream stick, plant label or a shallow spoon)		
Methylated spirits			Rooting hormone		
Broom			Watering can		
Secateurs			Hoses		
Knife			Forks		
Trays, pots, tubes, and containers			Fertiliser		
Potting mix			Plant labels		
Wheelbarrow			Pencils		
Shovel and Spade			Rubbish bins		