

ASSESSMENT GUIDELINES

Unit 20556

Demonstrate knowledge of plant propagation

Level 2, Credit 10, version 2

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Unit standard 20556
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Level of performance required for this unit standard

This is a level 2 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under general supervision, as directed; with some responsibility for the standard of the outcome achieved.
- To complete tasks that are established and familiar, with a moderate range of skill and knowledge.
- To apply basic operational knowledge, use readily available information and known solutions to solve familiar problems.

Assessors may consider linking the assessment of this unit standard with assessment for:

20557	Propagated plants from seed
20558	Propagate plants by cuttings
20559	Propagate herbaceous plants by division
20572	Bud and graft young plants

Workplace assessment:

For guidelines on Workplace Assessment, please refer to the NZHITO Workplace Assessors Manual, and for further information, please contact: NZHITO, PO Box 8638 , Christchurch, Ph 03 9644 735, Fax 03 9644 737, website www.hortito.org.nz

Special notes:

This unit standard replaces unit standards 814 and 12404.

**Unit 20556: Demonstrate knowledge of plant propagation
(Apprentice copy)**

ELEMENT	COMPETENT	Range of evidence an assessor should consider
Element 1 Explain the differences between sexual and asexual plant propagation	Yes/No	<ul style="list-style-type: none"> • Define sexual and asexual plant propagation. • Give three advantages and three disadvantages of sexual and asexual propagation in terms of their use for plant propagators.
Element 2 Describe the propagation of plants from seed	Yes/No	<ul style="list-style-type: none"> • Describe sources of seed and the importance of storage of seed to maintain seed viability. • Describe suitable conditions for seed germination, including various seed treatments, germination requirements, and seed viability. • Describe what makes good seed raising media, suitable containers for seed raising, and good soil conditions for field sown seed. • Describe two methods of sowing seed in containers (may include both manual and mechanised methods). • Describe two methods of sowing seed in the field (may include both manual and mechanised methods). • Describe how to maintain suitable conditions for seed germination and seed establishment in both containers and in the field. • Name ten plants commonly grown from seed and give two reasons for each as to why they are best propagated this way.
Element 3 Describe the propagation of plants from division	Yes/No	<ul style="list-style-type: none"> • Describe each common type of division and give two examples of plants grown by each method. Common types of division include: crowns, rhizomes, tubers, bulbs, corms, and runners. • Describe the right time to carry out division. • Describe how you would select suitable parent material. • Describe the establishment and after care of divided plant material. • Give two reasons why you would propagate plants by division.
Element 4 Describe the propagation of plants by cuttings	Yes/No	<ul style="list-style-type: none"> • Describe each common type of cuttings and give two examples of plants grown by each method. Common types of cutting include: stem cuttings, leaf cuttings, root cuttings, hardwood cuttings, semi-hardwood cuttings, and soft wood cuttings. • Describe the right time to carry out taking cuttings. • Describe how you would select suitable cutting material. • Describe suitable environments for cutting propagation in greenhouse or protected environments, and in the field. • Describe how you would take care of cuttings until rooted. • Give two reasons why you would propagate plants from cuttings.

<p>Element 5 Describe the propagation of plants by budding and grafting</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> • Describe each common method of budding and grafting and give two examples of plants propagated by each method. Common methods of budding and grafting may include: chip bud, T bud, whip and tongue graft, cleft graft. • Describe how you would select the correct budding or grafting method to suit the plant species and describe the right time to carry out grafting or budding. • Describe how you would select suitable scion material and rootstocks and check their compatibility. • Describe how you would care for the grafted or budded plants to ensure success. • Give two reasons why budding and grafting are used in the propagation of plants.
<p>Element 6 Describe the propagation of plants by tissue culture</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> • Give an overview of common tissue culture methods. These may include meristem culture and embryo culture. Give two examples of plants propagated by each method. • Describe how to select the right plant parts and a suitable culture medium to suit the plants being propagated and the tissue culture method used. • Describe the tissue culture process. The steps may include: hygiene, parent material, dissection, culture, deflasking, hardening off. • Give two reasons why tissue culture is used in the propagation of plants
<p>Element 7 Describe propagation of plants by layering</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> • Describe the common methods of plant layering and give one example of a plant propagated by each method. Examples of layering may include: simple layering, mound layering, tip layering, and air layering. • Describe how you would select the right layering method to suit the plant species being propagated and the timing of the operation. • Describe how you would establish and care for the layered material to ensure success. • Give two reasons why you would propagate plants by layering.
<p>Element 8 Outline plant breeder's rights</p>	<p>Yes/No</p>	<ul style="list-style-type: none"> • Outline the legal forms of protection that are available and the rights of plant breeders and licensed growers. Legal forms of protection may include Plant Variety Rights, trademarks, copyright, and patents.

_____ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 20556 (version 2)

Signed (Assessor): _____

WPA Registration Number: _____ Date: _____

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(Name of Apprentice)

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