

ASSESSMENT GUIDELINES

Unit 20566

Propagate plants using tissue culture

Level 4, Credit 10, version 2

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Unit standard 20566

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Level of performance required for this unit standard

This is a level 4 unit standard. At this level trainees are expected to demonstrate the following abilities when completing assessment tasks:

- To work under broad guidance, independently; with complete responsibility for the standards of the outcome achieved.
- To apply the technical skills, supporting knowledge, and innovation to complete the task to the specified standard, in a variety of familiar and unfamiliar contexts.
- To analyse and interpret information, and make an informed judgement.

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

Entry information:

Recommended: Unit Standard 20556, *Demonstrate knowledge of plant propagation*, or demonstrate equivalent knowledge and skills.

Special notes:

This unit standard replaces unit standard 12405.

Workplace procedures refers to verbal or written instructions to staff on procedures for the worksite and equipment.

Legislation relevant to this unit standard includes, but is not limited to, the Health and Safety in Employment Act 1992, the Resource Management Act 1991, and their subsequent amendments.

Work may involve exposure to chemical, dangerous or hazardous substances. Safety procedures are observed in accordance with NZS 8409:2004, *Management of Agrichemicals*, available from Standards New Zealand <http://www.standards.co.nz> or the NZ Agrichemical Education Trust <http://www.growsafe.co.nz>

Unit 20566: Propagate plants using tissue culture (Apprentice copy)

ELEMENT	Competent	Range of evidence an assessor should consider
Element 1 Maintain hygiene	Yes/No	<ul style="list-style-type: none"> • Sterilise containers, instruments, and water and store them aseptically according to practices used on the property. • Sterilise work surfaces and maintain them according to practices used on the property. • Operate any equipment used to maintain a sterile work area according to practices used on the property.
Element 2 Prepare media	Yes/No	<ul style="list-style-type: none"> • Prepare culture media for the production of three named plant species. • Prepare culture media for the three plant species and add to the containers according to practices used on the property.
Element 3 Propagate plants using tissue culture	Yes/No	<ul style="list-style-type: none"> • Propagate three named plants using tissue culture • Sterilise and prepare plant material according to practices used on the property. • Embryos, meristems or other plant tissues removed aseptically. • Place explants in the culture medium according to practices used on the property. • Place containers in the culture room in conditions that encourage cell multiplication. • Where necessary remove further material from cultures, process, and place in the culture room for multiplication. • Maintain the culture environment to optimise culture growth and development including shoot and root growth. Environment includes: temperature, light, humidity, air movement.
Element 4 Establish and harden off plants structure	Yes/No	<ul style="list-style-type: none"> • Remove propagated material from culture room and harden off according to practices used on the property. • Maintain conditions for plant growth and development according to species requirements, buyer specifications, and workplace practices. Conditions may include: transplanting one or more times into tubes, cells, trays, pots, or planter bags. • Harden plants off, package, and dispatch to buyers on time, and according to practices used on the property.
Element 5 Keep records of propagation by tissue culture	Yes/No	<ul style="list-style-type: none"> • Label propagation material and identify it according to practices used on the property. Labelling may include: plant name, date, and batch number. • Keep records of propagation according to practices used on the property. Records may include species and/or cultivar, source of propagation material, collection date, processing date, culture used, culture room conditions, any further culturing dates, root and shoot growth development, hardening off date.

_____ (Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 20566 (version 2)

Signed (Assessor): _____

WPA Registration Number: _____ Date: _____

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(Assessor copy)**

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Element 1 Maintain hygiene	Yes/No	<ul style="list-style-type: none"> • Sterilise containers, instruments, and water and store them aseptically according to practices used on the property. • Sterilise work surfaces and maintain them according to practices used on the property. • Operate any equipment used to maintain a sterile work area according to practices used on the property.
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Please send this page to your NZHITO Regional Manager, who will forward it to National Office to register the credits on your NZQA Record of Learning.

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