

<b>Title</b>	<b>Describe, select, collect and prepare seeds for plant propagation purposes</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>8</b>

<b>Purpose</b>	People credited with this unit standard are able to: describe seeds as a method of nursery propagation, seed selection criteria and characteristics of suitable seed; select and collect seeds; and clean, treat, store seeds and maintain seed storage records.
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<b>Classification</b>	Horticulture > Nursery Production
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<b>Available grade</b>	Achieved
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## Guidance Information

- Legislation and standards relevant to this unit standard include but are not limited to:
  - BIO-GRO Standards <https://www.biogro.co.nz/biogro-organic-standards>
  - Demeter Standards <https://biodynamic.org.nz/demeter>
  - Health and safety at Work Act 2015;
  - Plant Variety Rights Act 1987;
  - Resource Management Act 1991; and their subsequent amendments.
- Definitions
 

*Eco-sourcing* refers to the sourcing of seeds or other plant material in such a way that the genetic diversity of the local population is maintained; this definition embodies the principles of: collecting seed from the same area in which to plant the plants grown from them, collecting seed from natural plant communities or populations, collecting from a range of individuals within that population.

*Workplace procedures* refer to oral or written instructions to staff on procedures for the worksite and equipment.
- For the purposes of assessment, evidence must be in accordance with workplace procedures.

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## Outcomes and performance criteria

### Outcome 1

Describe seeds as a method of nursery propagation, seed selection criteria and characteristics of suitable seed.

**-Performance criteria**

- 1.1 Describe seeds as a method of nursery propagation in terms of the factors that influence seed use.
- Range factors may include but are not limited to – seed variability, economic factors, large scale plantings, natives, conservation of genetic resources, plant breeding, rootstocks for budding and grafting, annual plant production, perennial production, organic systems; evidence of four factors is required.
- 1.2 Describe seed selection criteria in terms of what constitutes suitable seeds.
- Range criteria may include but are not limited to – true to type, collected from strong and healthy plants, mature healthy seed, suitable for climatic and site conditions, proven seed production history, proven pest and disease resistant qualities, specified eco-sourcing requirements, organic status, compliance with certifying agency requirements, compliance with Demeter Standards; evidence of four criteria is required.
- 1.3 Describe characteristics of suitable seeds for collection in terms of considerations when collecting seeds.
- Range may include but is not limited to – disease-free, fruit colour and softness, wing development and colour, seed and embryo maturity, ease of seed removal, optimum time to collect; evidence of three characteristics is required.

**Outcome 2**

Select and collect seeds.

- Range evidence for at least five different species, with a minimum of 5 seeds for each species is required.

**Performance criteria**

- 2.1 Obtain approval to collect seeds where necessary in accordance with workplace procedures, Plant Variety Rights (PVR), and permission from landowners.
- 2.2 Visually inspect seeds and source plant prior to collection to ensure seed collection criteria are met.
- 2.3 Collect and handle seeds to maintain maximum viability.
- Range collection methods may include but are not limited to – hand or machine, ladders, shaking, cherry-pickers, selective pruning, felling, eco-sourcing; evidence of two methods is required.

2.4 Label seeds and identify collection details.

Range date, plant species name, origin information/provenance.

### Outcome 3

Clean, treat, store seeds, and maintain seed storage records.

### Performance criteria

3.1 Separate seed from other materials and clean to ensure seed trays are disease and pest free and seeds are ready for treatments.

Range may include but is not limited to – removal of wings, removal of encasing flesh, removal from cones or seed pods, sieving, vibrating, flotation, wet and dry techniques, winnowing, threshing; evidence of two methods is required.

3.2 Enhance and maintain seed viability using seed treatment techniques.

Range seed treatments may include but are not limited to – soaking, drying, post-harvest seed stratification specific to each species; a period of cooling or warm temperature, moisture, aeration levels, scarification, chemical treatments to protect from pests or disease; evidence of three techniques is required.

3.3 Store seed in accordance with species requirements to maintain viability, maturity and storage life.

Range may include but is not limited to – optimum temperature, light and moisture levels, aeration, insect damage control, vacuum sealing, controlled inert atmospheres; evidence of three storage requirements is required.

3.4 Maintain and update seed storage records.

<b>Planned review date</b>	31 December 2026
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 April 2012	31 December 2024
Review	2	28 April 2022	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0052
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact Muka Tangata - People, Food and Fibre Workforce Development Council [qualifications@mukatangata.nz](mailto:qualifications@mukatangata.nz) if you wish to suggest changes to the content of this unit standard.