

ASSESSMENT GUIDELINES

Unit 10956

Demonstrate knowledge of the steps involved
in producing a high quality bare root seedling

Level 4, Credit 4, version 3

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Unit standard 10956

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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 technical skills, 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 judgment.

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:

The study of radiata pine nursery practice may be used as the basis for this unit standard. The principles involved are equally applicable to other bare root tree seedling crops.

**Unit 10956: Demonstrate knowledge of the steps involved in producing a high quality bare root seedling
(Apprentice copy)**

ELEMENT	Competent	Range of evidence an assessor should consider
Element 1 Demonstrate knowledge of sowing depth and spacing.	Yes/No	<ul style="list-style-type: none"> ▪ State optimum depth of sowing and identify the effects of sowing depth on seedling emergence. Range: seed thickness, drying out, seed covering, herbicide damage. ▪ Identify optimum spacings and the effect of spacing on seedling development. Range: sturdiness, basal branch development, root collar diameter, light, geographical location of nursery.
Element 2 Demonstrate knowledge of weed, pest and disease control and of maintenance of seedling vigour.	Yes/No	<ul style="list-style-type: none"> ▪ State optimum weed control outcomes and identify the consequences of inadequate weed control on seedling quality and on nursery management. Range: weed competition, root damage, hand weeding, weed seeds, residual herbicides, knock down herbicides, selective and non-selective herbicides, spot spraying, time of application, lifting costs. ▪ Identify major pests and diseases with reference to their effect on seedling quality. Range: malformation, culling. ▪ Outline practices used to maintain seedling vigour in relation to the nutritional requirements of seedlings. Range: inter-row fertiliser applications, foliar applications, deficiency systems, rates, timing.
Element 3 Demonstrate knowledge of seedling conditioning and topping.	Yes/No	<ul style="list-style-type: none"> ▪ Describe conditioning treatments in relation to their effect on seedling development. Range: height growth, diameter growth, sturdiness, root development, mycorrhizal development, undercutting, lateral root pruning, wrenching. ▪ Outline the need for topping and topping practices with reference to their effect on seedling shoot development. Range: fascicle buds, small shoots, hardening off.
Element 4 Demonstrate knowledge of lifting and root trimming principles.	Yes/No	<ul style="list-style-type: none"> ▪ Detail lifting techniques and identify their effect on seedling quality. Range: pre-lift loosening by machine, pre-lift loosening by hand, foliage damage, root stripping, teasing, bunch lifting, single tree lifting, tertiary roots, mycorrhizae, exposure, root regeneration, height growth. ▪ Explain root trimming with reference to its effect on root placement at time of planting.

(Name of Apprentice)

is **Competent / Not yet competent** in Unit Standard 10956 (version 3)

Signed (Assessor): _____

WPA Registration Number: _____ Date: _____

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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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