

## Prepare and sow outdoor seedbeds manually

**Level** 1

**Credits** 5

**Purpose** This unit standard is for people working, or intending to work, in any kind of horticulture. People credited with this unit standard are able to: cultivate soil using hand tools; recognise and apply fertilisers and lime; prepare a seedbed by hand for sowing; sow seed by hand in outdoor seedbeds using broadcast or drilling methods; and maintain seedbed to seedling stage of growth.

**Subfield** Horticulture

**Domain** Production Horticulture

**Status** Registered

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**Entry information** Open.

**Accreditation** Evaluation of documentation by NZQA and industry.

**Standard setting body (SSB)** Primary Industry Training Organisation

**Accreditation and Moderation Action Plan (AMAP) reference** 0032

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Special notes

- 1 *Workplace procedures* refer to verbal or written instructions to staff on procedures for the worksite and equipment.
- 2 Legislation relevant to this unit standard includes but is not limited to the Health and Safety in Employment Act 1992.
- 3 The minimum seedbed size should be three square metres.

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## Elements and performance criteria

### Element 1

Cultivate soil using hand tools.

Range tools may include but are not limited to – spade, fork, rake, push hoe, Dutch hoe.

### Performance criteria

- 1.1 The tools selected are suitable for the task and are used safely.
- 1.2 Plain (single spit) digging is used in accordance with the soil characteristics.
- 1.3 Cultivation depth and tilth are consistent over the cultivated area.
- 1.4 Soil is aerated suitably for the soil characteristics and seed to be used.
- 1.5 Surface is even over the cultivated area.
- 1.6 Tools are cleaned and stored after use, in accordance with workplace procedures.
- 1.7 Added material is incorporated uniformly throughout the total area.

Range material to be added may include but is not limited to – organic matter, fertilisers, manures, and such soil conditioners as lime.

### Element 2

Recognise and apply fertilisers and lime.

Range recognise lime and three of the following fertilisers – sulphate of ammonia, sulphate of potash, superphosphate, a compound fertiliser, organic fertiliser, blood and bone, pelletised manure.

### Performance criteria

- 2.1 Fertiliser, manure, and lime are identified by sight.
- 2.2 Fertiliser or lime is measured out accurately, in accordance with workplace procedures.
- 2.3 Fertiliser or lime is spread evenly over the specified area at the instructed rate of application.
- 2.4 Equipment and materials are stored after use, in accordance with workplace procedures.

### **Element 3**

Prepare a seedbed by hand for sowing.

#### **Performance criteria**

- 3.1 The seedbed is cleared of weeds and surface trash, which are disposed of in accordance with workplace procedures.
- 3.2 Soil tilth is even and suited to intended seed and crop.
- 3.3 Soil aeration and moisture levels are appropriate for seed germination.
- 3.4 The seedbed is contoured in accordance with workplace procedures.

### **Element 4**

Sow seed by hand in outdoor seedbeds using broadcast or drilling methods.

#### **Performance criteria**

- 4.1 Broadcast seed is sown at an even rate and incorporated to an even depth, in accordance with workplace procedures.
- 4.2 Drilled seed is sown at a correct depth in straight drills spaced at intervals, in accordance with workplace procedures.
- 4.3 Sowings are labelled accurately and clearly.
- 4.4 The site is left clean and tidy with all equipment and unused seed stored, in accordance with workplace procedures.

### **Element 5**

Maintain seedbed to seedling stage of growth.

Range may include but is not limited to – weeding, watering, control of pests and diseases.

#### **Performance criteria**

- 5.1 Seedbed is regularly maintained to ensure optimum seedling growth.
- 5.2 Seed germination and seedling growth is checked regularly.
- 5.3 Records are kept of seedbed maintenance from seed germination to seedling stage of growth.

### **Please note**

Providers must be accredited by the Qualifications Authority, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact the Primary Industry Training Organisation via their website [www.primaryito.ac.nz](http://www.primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.