

Title	Graft mature fruit plants		
Level	4	Credits	10

Purpose	This unit standard is for people working in fruit production. People credited with this unit standard are able to mark elite high-health plants; store mature one-year-old wood; remove wood other than framework from the plants that are to be grafted; graft the plants; and maintain the new grafts.
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Classification	Horticulture > Fruit Production
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Available grade	Achieved
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Explanatory 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, the Resource Management Act 1991, and the Hazardous Substances and New Organisms Act 1996.
- 3 Equipment may include but is not limited to paint or labels, electronic, hydraulic, pneumatic and hand secateurs, pruning saws, sharpening stone, file, scabbard or pouch, loppers, air compressors, chainsaws, grafting knife, tape, sealant.
- 4 This unit standard covers approximately a six month period, from marking plants prior to fruit harvest, collecting dormant scion wood, grafting plants in the spring and maintaining the growing graft.
- 5 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://standards.co.nz>, or the NZ Agrichemical Education Trust <http://growsafe.co.nz>.

Outcomes and evidence requirements

Outcome 1

Mark elite high-health plants.

Evidence requirements

- 1.1 Fruit of selected plants is recognised as true to cultivar type.

- 1.2 Sustainable crop-loading levels are recognised for each cultivar.
- 1.3 Plants are selected that are free of major pests, diseases, and disorders.
- 1.4 Elite plants are selected and marked so that the marks will last for at least four months without damaging the plants and in accordance with workplace procedures.

Outcome 2

Store mature one-year-old wood.

Evidence requirements

- 2.1 Materials, tools, and equipment appropriate to the task being undertaken are selected.
- 2.2 Scion wood suitable for grafting is identified.
Range diameter, well exposed to the sun.
- 2.3 Sufficient scion wood is cut from the dormant marked plants for the intended grafting purpose.
- 2.4 The wood is labelled and stored in a suitable place so that it does not break dormancy, dry out, or become diseased.

Outcome 3

Remove wood other than framework wood from the plants that are to be grafted.

Evidence requirements

- 3.1 Materials, tools, and equipment appropriate to the task being undertaken are selected.
- 3.2 Pruning activities are carried out safely in accordance with workplace procedures.
- 3.3 Non-framework wood is identified, and is cut off cleanly and safely, leaving room for grafts.
- 3.4 Prunings are disposed of in accordance with workplace procedures.
- 3.5 Tools, equipment, and machinery are cleaned and maintained in accordance with manufacturers' specifications and workplace procedures.

Outcome 4

Graft the plants.

Evidence requirements

- 4.1 Materials, tools and equipment appropriate to the task being undertaken are selected.
- 4.2 Optimum stage of plant growth, and weather conditions for grafting the type of plant, are recognised and chosen.
- 4.3 Equipment is sharp and held so that smooth cuts are made in the wood and the operation is carried out safely and in accordance with workplace practices.
- 4.4 Each framework member is grafted in accordance with workplace procedures.
- Range cleft or saddle graft, rind graft, side graft.
- 4.5 Enough growth is left on large trees to take up excess vigour.
- 4.6 Plants are grafted to meet acceptable viability percentages in accordance with workplace procedures.
- Range compatibility, scions right way up, cambiums matching, two or three buds per scion, smooth cuts.
- 4.7 Grafts are secured and made waterproof without disturbing the scion in accordance with workplace procedures.
- 4.8 Wound dressings are used where necessary.
- 4.9 Tools, equipment, and machinery are cleaned and maintained in accordance with manufacturers' specifications and workplace procedures.

Outcome 5

Maintain the new grafts.

Range plants are maintained for at least six weeks after grafting.

Evidence requirements

- 5.1 Interfering stock growths and grafting tape are removed without damage to stock or young scions.
- 5.2 Defective and unwanted scion growths are removed without damage to the stock or remaining scions.
- Range as required – flowers, diseased growths, damaged, forking.

- 5.3 Plant pest and disease levels are monitored in accordance with workplace procedures.
- 5.4 Pest and disease control programme is carried out in accordance with workplace requirements.
- 5.5 Support for new scion growth is provided, if needed, in accordance with workplace procedures.

Replacement information	This unit standard and unit standards 776, 804, 12394, 19926, 19927, 19933, 19934, 19935, 21216, 21958, 22184 were replaced by unit standard 29893.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	1 February 1994	31 December 2020
Review	2	28 November 1997	31 December 2020
Revision	3	19 July 2001	31 December 2020
Review	4	27 July 2005	31 December 2020
Revision	5	24 February 2006	31 December 2020
Review	6	16 February 2017	31 December 2020

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

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR 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.