

<b>Title</b>	<b>Plan, prepare, carry out, and evaluate the propagation of crops in accordance with tikanga</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People awarded this unit standard are able to: plan the propagation of crops in accordance with tikanga and crop requirements; prepare the propagation bed in accordance with the plan, tikanga and crop requirements; carry out the propagation of crops in accordance with the plan, tikanga, and crop requirements; and evaluate the propagation of crops.
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<b>Classification</b>	Whenua > Te Whakamahi Whenua
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Recommended skills and knowledge  
Unit 25469, *Explain crop propagation in accordance with tikanga and crop requirements*; Unit 25471, *Explain the cultivation of crops in accordance with tikanga and crop requirements*.
- 2 Where local rohe are also occupied by a number of other iwi or hapū, the tangata whenua or mana whenua view should take precedence. Other iwi or hapū views should be encouraged in order to enrich and enhance understanding of key Māori concepts and practices.
- 3 Tikanga may include, but are not limited to:
  - the traditional use of pest control
  - the traditional management of plant disease
  - soil modification and development
  - the use of implements
  - the use of maramataka
  - the process of māhiti
  - the use of karakia
  - whanaungatanga
  - hākari.
- 4 Definitions  
*Maramataka* refers to a system of gardening throughout the lunar months.  
*Matariki* refers to the Pleiades star cluster, which is an indicator/sign for seasonal plant performance for some iwi.  
*Puanga* refers to the Rigel star, which is an indicator/sign for seasonal plant performance for some iwi.  
*Rīwai* refers to potato.

*Kamokamo* refers to marrow.

*Kānga* refers to maize, corn.

*Hue* refers to gourds, the young hue was used for food and is similar in texture to the marrow.

*Paukena* refers to pumpkin.

*Māhiti* refers to sorting and separating according to size and quality.

- 5 Legislation relevant to this unit standard include, but are not limited to:  
Health and Safety at Work Act 2015 (available at:  
<http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>);  
Hazardous Substances and New Organisms Act 1996 (available at:  
<http://www.legislation.govt.nz/act/public/1996/0030/latest/DLM381222.html>);  
Environmental Protection Authority Act 2011 (available at:  
<http://www.legislation.govt.nz/act/public/2011/0014/latest/DLM3366813.html>);  
and any subsequent amendments.
- 6 Range  
Crop species may include but are not limited to – kūmara, rīwai, kamokamo, taro, kānga, hue, paukena;  
evidence of two is required.
- 7 Assessment of skills may occur within individual or group settings. However, each candidate must demonstrate individual competence.

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## Outcomes and performance criteria

### Outcome 1

Plan the propagation of crops in accordance with tikanga and crop requirements.

### Performance criteria

- 1.1 Objectives for the propagation of crops are planned for.
- Range may include but is not limited to – production, quality, seed sources, long-term planning;  
evidence of two is required.
- 1.2 Selection of the site is planned for.
- Range may include but is not limited to – water supply, environment, adequate light, aspect, soil profile;  
evidence of two is required.
- 1.3 Seasons and times for propagation are planned for.
- Range maramataka, observations of Matariki or Puanga.

1.4 Techniques for the propagation of crops are planned for.

Range may include but are not limited to – mounding, broadcasting, transplanting, manual planting, mechanical planting, contour, aspect;  
evidence of two is required.

1.5 Maintenance of propagation bed is planned for.

Range may include but is not limited to – materials, aeration, temperature, drainage, irrigation;  
evidence of two is required.

1.6 Potential deviations from the plan are included.

Range may include but are not limited to – weather conditions, equipment shortage/breakdown, crop diseases, pest control;  
evidence of two is required.

## Outcome 2

Prepare the propagation bed in accordance with the plan, tikanga and crop requirements.

### Performance criteria

2.1 The soil for propagation is prepared.

Range may include but is not limited to – weed free, friable, moisture content;  
evidence of two is required.

2.2 The propagation bed is prepared.

Range may include but is not limited to – materials, aeration, temperature, drainage, irrigation;  
evidence of two is required.

2.3 Tools required for propagation are prepared.

Range may include but is not limited to – mechanical, manual;  
evidence of any two is required.

## Outcome 3

Carry out the propagation of crops in accordance with the plan, tikanga, and crop requirements.

### Performance criteria

3.1 Propagation is carried out.

3.2 Maintenance of the propagation bed and crops is carried out.

**Outcome 4**

Evaluate the propagation of crops.

**Performance criteria**

- 4.1 The techniques applied in the propagation of crops are evaluated in terms of the outcome of the crops.
- 4.2 Any deviations from the plan are evaluated in terms of the effects on the crops and the outcome of the crops.
- 4.3 Areas for improvement in the propagation of crops are evaluated in terms of enhancing the future outcome of the crops.

<b>Planned review date</b>	31 December 2025
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	21 May 2010	31 December 2017
Revision	2	19 July 2012	31 December 2017
Review	3	19 November 2015	31 December 2023
Revision	4	31 May 2018	31 December 2023
Rollover and Revision	5	27 June 2019	31 December 2023
Review	6	25 March 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0226
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact NZQA Māori Qualifications Services [mqs@nzqa.govt.nz](mailto:mqs@nzqa.govt.nz) if you wish to suggest changes to the content of this unit standard.