

Title	Demonstrate knowledge of and prepare land for forest establishment using a mechanised spot cultivator		
Level	4	Credits	20

Purpose	<p>This unit standard is intended for people employed in a mechanised land preparation role in a forestry operation.</p> <p>People credited with this unit standard are able to: plan a spot cultivation operation using a mechanised spot cultivator, demonstrate knowledge of a mechanised spot cultivation machine and attachment, prepare land for forest establishment using a mechanised spot cultivator and carry out quality control in a mechanised spot cultivation operation.</p>
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Classification	Forestry > Machine Operations - Forestry
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes the Health and Safety at Work (HSW) Act 2015; the Resource Management (National Environmental Standards for Plantation Forestry) Amendment Regulations 2018; and any subsequent amendments.
- 2 References
Approved Code of Practice (ACOP) for Safety and Health in Forestry Operations, December 2012, available from www.worksafe.govt.nz.
 New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from <https://www.nzfoa.org.nz>.
- 3 Definitions
Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.
Job prescription refers to any written instructions for the operation and may include maps, harvest plans or cut plans.
Spot cultivation operation refers to preparing a site where a seeding is planted. It includes clearing the sight of slash (branches left over from logging, ripping the soil to break up any hard, packed soil and allowing air in, mounding the soil to lift the seedling above frost.

Worksite procedures refer to documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, quality assurance procedures, housekeeping standards, procedures to comply with legislative and local body requirements.

4 Assessment information

This unit standard must be assessed on-job.

All activities and evidence must be carried out in accordance with accepted industry practice and worksite procedures.

Outcomes and performance criteria

Outcome 1

Plan a spot cultivation operation using a mechanised spot cultivator.

Performance criteria

1.1 Machine capability is described.

Range slope, ground conditions.

1.2 Area is assessed in accordance with job prescription.

Range may include – identifying start point, identifying work direction, waterways, boundaries, setback requirements, hazards and risks.

1.3 Planning requirements for work areas are explained.

Range may include but is not limited to – risk management and hazard identification, other operations, other machines, ground conditions, environmental considerations, signage, historic sites.

1.4 Mechanised spot cultivation is planned in accordance with job prescription.

Range may include but is not limited to – planting stocking and acceptable range, planting spacing, setbacks, landings and extraction tracks, rip depth, mound height.

Outcome 2

Demonstrate knowledge of a mechanised spot cultivation machine and attachment.

Performance criteria

2.1 Components of the mechanised spot cultivation attachment are identified, and their function described in accordance with manufacturer's specifications.

Range coupling, ripper, moulder.

- 2.2 Safety features on the mechanised spot cultivation machine are identified and their function explained in accordance with manufacturer's specifications.

Range may include but is not limited to – operator protection structures, seat belts (or other safety restraint), fire systems, handrails, steps, lockout system, warning systems; evidence of six is required.

Outcome 3

Prepare land for forest establishment using a mechanised spot cultivator.

Performance criteria

- 3.1 The risks specific to land preparation using a mechanised spot cultivator are assessed and controlled.

- 3.2 Machine and operator capability are continually assessed as work progresses and adjusted where required.

- 3.3 Mechanised spot cultivation attachment is connected to the machine in accordance with manufacturer's recommendations.

- 3.4 Machine and attachment are operated in a smooth and controlled manner.

- 3.5 Communication is maintained between worksite personnel to ensure job prescription requirements are met.

- 3.6 Environmental considerations are managed in accordance with the job prescription.

Range may include – reinstatement of water controls, native boundaries, waterways, archaeological sites.

Outcome 4

Carry out quality control in a mechanised spot cultivation operation.

Performance criteria

- 4.1 The quality control activity is planned in accordance with the job prescription.

Range planning includes – representative of the area, plot location, sampling techniques.

- 4.2 Quality control activity is carried out in accordance with the job prescription.

Range distance between spots, distance between rows, cultivation depth, rip length, mound height.

4.3 The recorded data from the quality control activity is analysed and a result determined.

4.4 Outcomes of the quality control activity are explained in terms of compliant and non-compliant outcomes.

Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	27 August 2020	N/A
Rollover	2	26 April 2024	N/A

Consent and Moderation Requirements (CMR) reference	0173
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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 Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.