Title	Demonstrate knowledge of forest mechanised harvesting and processing		
Level	3	Credits	5

Purpose	This unit standard is intended for people employed in a mechanised harvesting and/or processing operation. People credited with this unit standard are able to demonstrate knowledge of: mechanised harvesting; machines suitable for mechanised harvesting; and cutting and delimbing units and their operation.

Classification	Forestry > Forest Mechanised Harvesting

Available grade	Achieved

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 https://worksafe.govt.nz/.
New Zealand Forest Owners Association, *Forest Practice Guides* (2019), and any subsequent amendments, available from https://www.nzfoa.org.nz.

3   Mechanised harvesting and/or processing involves the use of machines to complete any one or any combination of felling, delimbing, processing, or bunching of plantation trees.

4   Definition
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of mechanised harvesting.

Performance criteria

1.1   Functions of mechanised harvesting machines are described in accordance with accepted industry practice.

         Range   thinning, felling, delimbing, bunching, processing.

1.2   The advantages of mechanised harvesting are explained in accordance with accepted industry practice.

1.3   The disadvantages of mechanised harvesting are explained in accordance with accepted industry practice.

1.4   Situations where mechanised harvesting machines would be suitable are described in accordance with accepted industry practice.

1.5   Mechanised harvesting felling cuts are described in accordance with accepted industry practice.

1.6   Operations that can improve the extraction process are described in accordance with accepted industry practice.

         Range   shovelling, bunching.

1.7   The importance of calibration for machine performance is described in accordance with accepted industry practice.

1.8   The risks specific to mechanised processing and harvesting are identified, and methods to control them are explained in accordance with accepted industry practice.

         Range   evidence of four risks and a control method for each is required.

1.9   The accepted forestry industry practice requirements relevant to mechanised harvesting are explained.

         Range   mobile plant use, tree felling.

Outcome 2

Demonstrate knowledge of machines suitable for mechanised harvesting.

Performance criteria

2.1   Types of felling machines are described, and their functions explained in accordance with accepted industry practice.

         Range   feller buncher, feller director.

2.2   Features of felling heads are explained in accordance with accepted industry practice.

        Range   shears, chainsaw, rotary disk.

2.3   Types of processing machines are described, and their functions explained in accordance with accepted industry practice.

        Range   stroke boom delimber, harvester, bed processor, static delimber, log-making processor.

2.4   Types of extraction machines used in mechanised harvesting operations are described and their functions explained in accordance with accepted forestry practice.

        Range   forwarder, grapple.

Outcome 3

Demonstrate knowledge of cutting and delimbing units and their operation.

Performance criteria

3.1   The importance of correct operation and maintenance of the felling and processing head is described in accordance with accepted industry practice.

        Range   production, damage, wear, safety.

3.2   Consequences of damage to the cutting unit and delimbing tools are described in terms of the impact on the mechanised harvesting operation in accordance with accepted industry practice.

        Range   financial consequences, non-financial consequences, safety.

Planned review date	31 December 2024

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	8 November 1996	31 December 2012
Revision	2	19 June 1998	31 December 2012
Review	3	5 December 2000	31 December 2012
Review	4	22 May 2008	31 December 2016
Review	5	19 March 2015	N/A
Review	6	26 March 2020	N/A

Consent and Moderation Requirements (CMR) reference	0173

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

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.