

Title	Develop a production plan, and manage and report on the operation of a commercial vermicomposting unit		
Level	5	Credits	12

Purpose	<p>This unit standard is for people working in, or who wish to work in resource recovery vermicomposting.</p> <p>People credited with this unit standard are able to: develop a production plan for the operation of a commercial vermicomposting unit; manage a commercial vermicomposting unit; and report on the operation of a commercial vermicomposting unit.</p>
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Classification	Resource Recovery > Composting
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Available grade	Achieved
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Guidance Information

- All work practices must comply with the: Health and Safety at Work (HSW) Act 2015; Resource Management Act (RMA) 1991; Hazardous Substances and New Organisms Act 1996; NZS 4454:2005 *Composts, soil conditioners and mulches*; and *The New Zealand Waste Strategy: Reducing Harm, Improving Efficiency* 2010 Ministry for the Environment, available at <http://www.mfe.govt.nz>.
- Personal protective equipment (PPE) must be used throughout operations in accordance with company procedures. PPE includes but is not limited to – gloves, eye protection, appropriate footwear, overalls, hearing protection, respirator or facemask, high visibility clothing, fire extinguisher, first aid kit, eye wash kit, face shield/mask; hard hat.
- Definitions**

Company procedures mean the documented methods for performing work activities and include health and safety, environmental, and quality management requirements. They may refer to manuals, codes of practice, or policy statements.

Feedstock is a mixture of organic materials that form the food for worms in a vermicomposting unit.

Optimum environment includes moisture content, feedstock, drainage, aeration, temperature, covers, and microbiology.

Receival data refers to data related to the receiving of raw material supplies for feedstock.

Vermicomposting refers to a mixture of vermicast and unprocessed organic matter; it may also contain worm capsules and small worms. The term may also apply to a mix of vermicast and composted material.

A *vermicomposting unit* is made up of a bed in which worms are placed, and worm cast and (depending on the type of unit) liquid fertilizer is produced. The bed may include a combination of – of aged manures or composted materials, shredded paper products, decomposing leaves, straw, soil, vegetable or fruit discard materials.

Outcomes and performance criteria

Outcome 1

Develop a production plan for the operation of a commercial vermicomposting unit.

Performance criteria

- 1.1 Materials, supply contracts, and receival data are reviewed in terms of quantifying production requirements.
- Range materials include but are not limited to – feedstock, area available for operation, tonnage of worms required to process the feedstock, covers, equipment, soil medium for base.
- 1.2 Conditions that may affect vermicomposting unit are identified, interpreted, and reported in accordance with the type and volume of feedstock to be processed.
- 1.3 Production requirements are estimated in accordance with the feedstock to be processed.
- 1.4 Environmental and health and safety aspects, and their impacts on production are assessed in accordance with HSW Act and RMA requirements.
- Range environmental and health and safety aspects may include but are not limited to – spills, ponding, odours, contamination, pests.
- 1.5 The production plan takes account of operation capabilities and site constraints.

Outcome 2

Manage a commercial vermicomposting unit.

Performance criteria

- 2.1 Vermicomposting unit establishment is managed in accordance with production requirements.
- Range size, location, costs.
- 2.2 Management ensures that the optimum environment required for the vermicomposting unit is maintained.
- Range limiting contamination, pests.

2.3 Management ensures that action is taken to rectify any issues identified in accordance with vermicomposting requirements.

Range issues may include – worms losing colour, fatalities, migration.

2.4 Management ensures that health and safety requirements related to the vermicomposting unit are met in accordance with company procedures and legislation.

Outcome 3

Report on the operation of a commercial vermicomposting unit.

Performance criteria

3.1 Reports on the operation of a vermicomposting unit are completed in accordance with the production plan.

Range production statistics, recommendations, risk management, health and safety.

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	23 April 2007	31 December 2025
Rollover and Revision	2	28 March 2019	31 December 2025
Review	3	27 March 2025	31 December 2025

Consent and Moderation Requirements (CMR) reference

0014

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