Title	**Demonstrate knowledge of composting worms and the environment required for vermicomposting for resource recovery**		
Level	**2**	**Credits**	**3**

Purpose	This unit standard is for people working in, or who wish to work in resource recovery vermicomposting. People credited with this unit standard are able to demonstrate knowledge of the biology of composting worm species and describe the environment required for vermicomposting for resource recovery.

Classification	Resource Recovery > Composting

Available grade	Achieved

Guidance Information

Definitions
Feedstock is a mixture of organic materials that form the food for worms in a vermicomposting unit.
Organic in this industry refers to materials that are putrescible or are of animal or vegetable origin.
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.
Vitality of the vermicomposting unit refers to health and quantity of the worms.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the biology of composting worm species.

Performance criteria

1.1 Two species of composting worms are identified by their scientific names.

1.2 The physical appearance of two species of composting worms is described in terms of average length and diameter, segments, and colours.

1.3 The physical features of composting worms are described in terms of their characteristics and functions.

Range clitellum or saddle, setae, movement, circulation, crop.

1.4 The life cycle of composting worms is described from fertilization to adulthood.

Range process, stages, incubation period, time span, reproduction rate.

1.5 The digestive process of composting worms is described in terms of the way worms process food and the rate of throughput.

1.6 The diversity and availability of feedstock for the vermicomposting unit is identified in accordance with the requirements of the worm population.

Range requirements – volume, contents, preparation.

1.7 The significance of population growth in vermicomposting is described in terms of feedstock availability and the size and vitality of the vermicomposting unit.

Outcome 2

Describe the environment required for vermicomposting for resource recovery.

Performance criteria

2.1 The environment required is described in terms of maintaining the vitality of the vermicomposting unit.

Range temperature, moisture content, drainage, aeration, worm placement.

2.2 The make-up of base (bedding) is described in terms of maintaining the vitality of the vermicomposting unit.

Range may include but is not limited to a combination of – aged manures; shredded paper products; decomposing leaves; straw; soil or mature compost.

2.3 The process of maintaining the required environment for vermicomposting is described in terms of maintaining the vitality of the vermicomposting unit.

Range moisture content, feedstock, drainage, aeration, temperature, covers.

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.