

Title	Demonstrate knowledge of the biology of the New Zealand Greenshell mussel		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: demonstrate knowledge of, the features, habitat, and geographical locations Greenshell™ mussel; the anatomical features of the Greenshell™ mussel; the feeding, reproduction and life cycle of the Greenshell™ mussel; the factors that impact on the growth of the Greenshell™ mussel; and abnormal features and/or behaviours that could indicate potential Greenshell™ mussel health issues.
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Classification	Seafood > Aquaculture
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Available grade	Achieved
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Guidance Information

Definition

New Zealand Greenshell mussel refers to Greenshell™ mussels, of which the Maori name is kutai or kuku.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the features, habitat, and geographical locations of Greenshell™ mussel.

Performance criteria

- 1.1 Identify the scientific name of the Greenshell™ mussel.
- 1.2 Describe the distinguishing features of the Greenshell™ mussel.
Range evidence is required for three features.
- 1.3 Describe the habitat of the Greenshell™ mussel.
- 1.4 Describe the geographical locations of Greenshell™ mussel marine farms.
Range evidence is required for three farm locations.

Outcome 2

Demonstrate knowledge of the anatomical features of the Greenshell™ mussel.

Performance criteria

2.1 Locate and identify the exterior anatomical features of a Greenshell™ mussel.

Range left and right shell, periostracum, byssus (beard).

2.2 Locate and identify the interior anatomical features of a Greenshell™ mussel.

Range foot, gills, labial palps, adductor muscle, gut, gonad, mantle.

2.3 Describe the function of each anatomical feature.

Range left and right shell, periostracum, byssus (beard), foot, gills, labial palps, adductor muscle, gut, gonad, mantle.

2.4 Determine the sex of the Greenshell™ mussel.

Outcome 3

Demonstrate knowledge of the feeding, reproduction and life cycle of the Greenshell™ mussel.

Performance criteria

3.1 Describe what occurs at each stage of the life cycle of the Greenshell™ mussel.

Range stages include – egg, sperm, trochophore, veliger, spat, juvenile, adult.

3.2 Describe the feeding method and food source at each life cycle stage.

Range stages include – egg, sperm, trochophore, veliger, spat, juvenile, adult.

3.3 Describe what occurs at each stage of the reproductive cycle.

Range gonad development, natural triggers for spawning.

Outcome 4

Demonstrate knowledge of the factors that impact on the growth of the Greenshell™ mussel.

Performance criteria

- 4.1 Describe methods of measuring the growth of the Greenshell™ mussel.
- Range evidence of at least two methods is required
- 4.2 Describe factors that can affect the growth, and the impact of each factor on the growth of the Greenshell™ mussel.
- Range growth factors may include but are not limited to – water temperature, water quality, food quality, food availability, mussel age, stress;
evidence of at least four factors is required.

Outcome 5

Demonstrate knowledge of abnormal features and/or behaviours that could indicate potential Greenshell™ mussel health issues.

Performance criteria

- 5.1 Describe abnormal features and/or behaviours that could indicate a potential health issue with the Greenshell™ mussel.
- Range evidence of five abnormal features and/or behaviours is required.
- 5.2 Describe the action to take if abnormal features and/or behaviours are identified and the reasons why this action is important.
- Range evidence of two reasons is required.

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	21 April 1999	31 December 2012
Review	2	25 February 2003	31 December 2012
Review	3	24 August 2006	31 December 2012
Review	4	17 June 2011	31 December 2020
Review	5	1 November 2018	N/A
Rollover	6	29 February 2024	N/A

Consent and Moderation Requirements (CMR) reference	0123
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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.