

Title	Describe environmental management and carbon dioxide enrichment of greenhouses		
Level	5	Credits	5

Purpose	People credited with the unit standard are able to: describe greenhouse environmental management; and carbon dioxide (CO ₂) enrichment of greenhouses, and assess enrichment options.
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Classification	Horticulture > Production Horticulture
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015; and any subsequent amendments.
- 2 Definition
Geometry refers to the way of getting CO₂ into the greenhouse.
- 3 Crop refers to any commercial horticulture crop from the following sectors: fruit, vegetable, floriculture and nursery.

Outcomes and performance criteria

Outcome 1

Describe greenhouse environmental management.

Performance criteria

- 1.1 Describe techniques used to manipulate the indoor environment, and outcomes expected in terms of crop health and growth.

Range evidence of three examples for each of – temperature manipulation; daylight manipulation is required.

- 1.2 Describe the operating principles and benefits of control systems in terms of their influence on crop growth and yield within the indoor environment.

Range evidence of two examples for each of – heating, cooling, fans, screens, climate control systems, fogging, venting, diffused light systems is required.

Outcome 2

Describe CO₂ enrichment of greenhouses, and assess enrichment options.

Performance criteria

- 2.1 Describe greenhouse CO₂ enrichment in terms of targets and strategies.
- 2.2 Describe the benefits and costs of CO₂ enrichment in terms of a crop.
- 2.3 Describe geometry and equipment required to correctly enrich a greenhouse with CO₂ in terms of maximum crop growth and quality.
- 2.4 Assess enrichment technology options in terms of crop production in greenhouses.

Range evidence of two options is required.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 February 2017	31 December 2023
Review	2	16 December 2021	N/A

Consent and Moderation Requirements (CMR) reference	0052
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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.