

91290



Draw a cross through the box (X) if you have NOT written in this booklet

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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 2 Agricultural and Horticultural Science 2024

91290 Demonstrate understanding of techniques used to modify physical factors of the environment for NZ plant production

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of techniques used to modify physical factors of the environment for commercial plant production in New Zealand.	Demonstrate in-depth understanding of techniques used to modify physical factors of the environment for commercial plant production in New Zealand.	Demonstrate comprehensive understanding of techniques used to modify physical factors of the environment for commercial plant production in New Zealand.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

Do not write in the margins (X/X/X/X). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

QUESTION ONE: Shelter

Shelter is used to provide protection from physical environmental factors.

Choose a horticultural product that requires or benefits from shelter.

Chosen horticultural product: _____

- (a) Looking at TWO different methods of shelter, explain how they can modify the physical environmental factors of your chosen horticultural product.

Method (1): _____

Method (2): _____

QUESTION TWO: Frost

Frost can negatively affect horticulture production. Growers can use frost protection such as helicopters, sprinklers, or frost fans to prevent damage to their crop.

Choose a horticultural product.

Chosen horticultural product: _____

(a) Explain how frost affects the growth of your chosen horticultural product.

(b) Choose the most suitable frost protection method for your chosen horticultural product, and explain how it can prevent frost damage.

Method: _____

- In your answer, you should consider:

QUESTION THREE: Water management in soils

Water management techniques are widely used in New Zealand to improve soil conditions for production of pasture and crops.

Choose a crop/pasture.

Crop/pasture: _____

Choose a water management practice.

Water management practice: _____

- (a) How does the use of your chosen water management practice modify the physical factors of the soil?

Extra space if required.
Write the question number(s) if applicable.

QUESTION
NUMBER

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