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NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

SUPERVISOR'S USE ONLY

Level 1 Agricultural and Horticultural Science, 2012

90924 Demonstrate knowledge of horticultural plant management practices and related plant physiology

9.30 am Tuesday 20 November 2012

Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate knowledge of horticultural plant management practices and related plant physiology.	Demonstrate in-depth knowledge of horticultural plant management practices and related plant physiology.	Demonstrate comprehensive knowledge of horticultural plant management practices and related plant physiology.

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.

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

TOTAL

ASSESSOR'S USE ONLY

You are advised to spend 60 minutes answering the questions in this booklet.

QUESTION ONE: WEED CONTROL

Weeds commonly grow around desired plants in vegetable plots and flower borders, as shown in the photograph below.

Weed growth in a garden plot



- (a) Weeds in a garden plot need to be controlled to improve plant production. Describe and explain how gardeners can control their weeds by physical methods.

- (b) Explain THREE ways in which weeds affect the growing conditions required for plant production.

(c) There are two principal methods of weed control – chemical and physical.
Select and justify the better management practice for controlling weeds by **comparing and contrasting** it with the other management practice.

In your answer, you could consider:

- the effectiveness in controlling weeds
- the effect on desirable plants
- growing conditions of desirable plants.

Selected control option: _____



QUESTION TWO: SHELTER

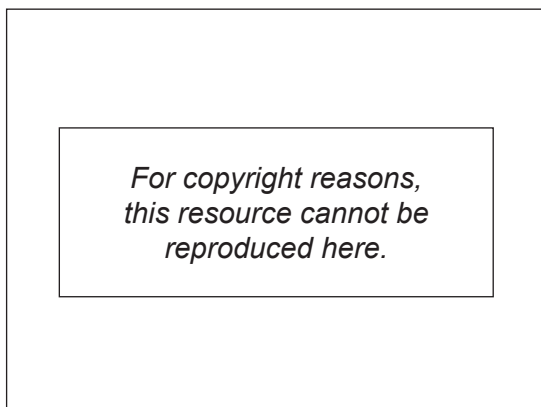
(a) Describe how shelter affects the growing conditions of plants.

(b) Shelter affects transpiration by plants. Explain how transpiration occurs, and how shelter affects the process.

In your answer, use the names of plant structures.

(c) A grower has been advised to provide shelter from the environment for their crop of lettuces. The two options they have are:

- shelter hedge
- cloches.

Shelter hedge

Source: <http://charlieandjo.wordpress.com/>

Cloche covering

Source: <http://www.alton-gardencentre.co.uk/>

QUESTION THREE: APPLE PRODUCTION

Apple growers carry out several management practices to maximise fruit production.

- (a) Describe THREE actions to be taken when planting and staking apple trees, and explain why each action should be carried out in the way you have described. You may use labelled diagrams.

Description of the Action	Explanation of the Action
Action 1	
Action 2	
Action 3	

- (b) Apple thinning is another management practice carried out in orchards. Explain THREE reasons for thinning the fruit on apple trees.

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

QUESTION
NUMBER

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