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SUPERVISOR'S USE ONLY

Level 2 Agricultural and Horticultural Science, 2018

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

9.30 a.m. Wednesday 28 November 2018
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 2–12 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

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Glasshouses are used to control the physical environment for plant production.



(a) Describe how the level of carbon dioxide can be controlled in glasshouses.

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Whitewash



https://www.redusystems.com/public/upload/application_techniques/image/Helikopter.jpg.

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The examination continues on the following page.**

QUESTION TWO: CITRUSASSESSOR'S
USE ONLY**Citrus orchard**

Source: http://www.uncleggong.com/data/file/bod_33/236990270_mKLpJoSw_Farmer27s_005.jpg

- (a) Describe how the use of reflective mulches in commercial orchards increases the quality of fruit.

Citrus are generally not tolerant of 'wet feet'. An orchardist has the choice of using either mounding or subsurface drains to control soil water levels.

- (b) (i) Describe the effect of drainage on plant growth, and explain how this will impact on crop yield, quality, and timing.

- (ii) Justify the use of either mounding or subsurface drainage in a citrus orchard by comparing and contrasting the two methods in terms of economic and environmental impacts.

Vineyard



(b) Justify the use of ONE of these methods to manage frost in vineyards by comparing and contrasting it with the other method.

In your answer:

- explain how both helicopters and frost sprinklers modify the environment
- analyse the practices in terms of economic, social, and environmental impacts.

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

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