

90919



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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SUPERVISOR'S USE ONLY

Level 1 Agricultural and Horticultural Science, 2013

90919 Demonstrate knowledge of soil management practices

9.30 am Tuesday 19 November 2013

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate knowledge of soil management practices.	Demonstrate in-depth knowledge of soil management practices.	Demonstrate comprehensive knowledge of soil management practices.

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

QUESTION TWO: GROWING CROPS**Vegetable garden**

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www.newgardenidea.me*

The soil of a vegetable garden is usually cultivated to prepare a seedbed before seeds are sown. Use the table below to describe THREE actions that are taken when preparing a seedbed. Explain why each of these actions should be carried out in the way you have described.

Description of the action	Explanation of the action
Action (1)	
Action (2)	
Action (3)	

Crops can be grown using crop rotation. Describe crop rotation.

QUESTION THREE: LIME AND FERTILISER

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Soil nutrients are essential to plant growth.

A grower has applied fertiliser containing NPK (nitrogen, phosphorus, and potassium) to the soil. Use the table immediately below to describe how these macronutrients affect plant growth.

Nutrient	Effect on plant growth
N	
P	
K	

Explain the effect that this fertiliser has on the properties of soil, and how this affects plant growth.

To increase yield, a grower is going to put lime on the soil instead of fertiliser.

Justify this decision by comparing and contrasting the effects that lime and fertiliser have on soil properties and plant growth.

In your answer, you could consider:

- the chemical properties of soil
- the biological properties of soil.

