

SUPERVISOR'S USE ONLY

90919



## Level 1 Agricultural and Horticultural Science, 2015

# 90919 Demonstrate knowledge of soil management practices

9.30 a.m. Monday 30 November 2015 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

#### **QUESTION ONE: VEGETABLE GARDEN**

#### Vegetable garden

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Crop rotation is important when growing vegetables.

(1)			
(2)			

Before sowing seeds, the garden can be cultivated to create a seed bed.

(b) Describe THREE actions to carry out when cultivating soil to create a seed bed. Explain why each action should be done in the way you have described.

Description of the action	Reason for the action
Action (1)	
Action (2)	
Action (3)	

3 In order to improve production, a grower is considering applying compost to their garden. ASSESSOR'S USE ONLY Explain how applying compost will improve production, and justify why it is a better option (c) than not applying compost. In your answer, consider: the effects on the chemical, physical, and biological properties of soil the effects on plant growth.

### Clay soil

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5 In order to improve production on a farm with clay loam soil, a grower is considering applying ASSESSOR'S USE ONLY fertiliser, either as a liquid or in a solid form. Compare and contrast these two methods of fertiliser application. (c) In your answer, consider: the effectiveness of the method the properties of soil effects on plant growth.

#### **QUESTION THREE: DAIRY FARMING**

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Before applying nutrients to the soil, a farmer is advised to do a soil test.

#### Core sample taken for a soil test

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See: www.sportsturfintl.com

(a)	Describe TWO things that a soil test will tell the farmer about the soil.  (1)
	(2)
(b)	Explain how liming affects the properties of soil, and how these properties affect plant growth.

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In order to improve grass production on a dairy farm, the farmer is considering applying eithe	r
effluent from the dairy shed or water through irrigation.	

(c)	Select and justify the better management practice by comparing and contrasting it to the other method.							
	Selected management practice:							
	In your answer, consider:  the physical properties of soil  the chemical properties of soil  effects on plant growth.							

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