

# 1

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## Level 1 Agricultural and Horticultural Science, 2017

### 90919 Demonstrate knowledge of soil management practices

9.30 a.m. Wednesday 22 November 2017  
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**

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## QUESTION ONE: SOIL COMPACTION

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Source: [https://www.agric.wa.gov.au/sites/gateway/files/Billies\\_good%20germination%20but%20poor%20in%20wheel%20tracks%20\(1\)\\_0.JPG/](https://www.agric.wa.gov.au/sites/gateway/files/Billies_good%20germination%20but%20poor%20in%20wheel%20tracks%20(1)_0.JPG/)

Heavy machinery is a common cause of soil compaction in agriculture.

(a) Describe TWO methods a farmer might use to **prevent** soil compaction.

Method 1	
Method 2	

(b) Describe TWO impacts soil compaction has on the physical properties of soil, and explain how each affects plant growth.

Impact	Effect on physical properties	Effect on plant growth







**QUESTION THREE: GARDENS**

- (a) Describe THREE actions taken to produce compost, and explain why each of these actions is taken.

Action	Explanation

- (b) Explain the effect compost has on soil properties.

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Root vegetables	Legumes	Brassicas and salads	Potato family
Carrots	Peas	Broccoli	Potato
Beetroot	Beans	Cauliflower	Tomato
Parsnips		Cabbage	Eggplant
		Kale	

- (c) Market gardeners rotate their crops on a seasonal basis. Using the crops in the table above, suggest a four-year crop rotation plan.

Year	Crop		
	Area 1	Area 2	Area 3
1			
2			
3			
4			



