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## Level 1 Agricultural and Horticultural Science, 2017

### 90921 Demonstrate knowledge of livestock management practices

9.30 a.m. Wednesday 22 November 2017

Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate knowledge of livestock management practices.	Demonstrate in-depth knowledge of livestock management practices.	Demonstrate comprehensive knowledge of livestock 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 2–11 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: SHEEP**

The table below shows the feed requirements of ewes during pregnancy and lactation. Use this table to answer part (a).

	Feeding level	
	Times maintenance	MJME/day*
Early and mid-pregnancy	x 1.0	11
Late pregnancy	Singles x 1.50	16
	Twins x 1.75	19
Lactation	Singles x 2.0	22
	Twins x 3.0	33

\*megajoules of metabolisable energy per day

- (a) Explain how a ewe's feed requirements change throughout pregnancy and lactation, and how a farmer could ensure that these feed and energy requirements are met.

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- (b) Terminal rams are those that are bred with ewes mainly for their rapid growth genetics to be passed on to offspring. Explain why a farmer may or may not choose to breed from terminal rams.

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**QUESTION TWO: ANGORA GOATS**

Angora goats are ruminants that are pastorally farmed in New Zealand. Their fleece is a fine fibre called mohair, which can be woven into many products and is often used as an alternative to sheep wool.



Source: <http://www.roysfarm.com/angora-goat>

- (a) In order to ensure proper rumen development, weaned Angora kids (young goats) are provided a variety of feeds, including roughages. Explain how providing Angora kids with a varied diet helps to develop the rumen.

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Fibre colour in Angora goats is determined genetically and they can be either black, brown, or white. White is the dominant and preferred colour.

- (b) Explain why, when two white Angora goats are mated, they could produce a brown kid.

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A farmer wants to increase the value of their Angora goat fibre. They can either buy/hire stud sires (males), or use ones they have bred themselves, to mate with the females.

- (c) Select the better management practice for improving the fibre quality of the herd, and justify your selection by comparing and contrasting it with the other method.

Selected management practice: \_\_\_\_\_

In your answer, consider:

- short-term and long-term productivity
- costs
- livestock management.

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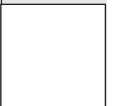
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**QUESTION THREE: CHICKENS AND PIGS**

ASSESSOR'S  
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- (a) Explain why drenching needs to be carried out, and why a farmer might use in-feed drench powder for pigs instead of a drench gun.

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- (b) Chickens and pigs are both non-ruminant animals. Explain how this affects what feed is suitable to give them.

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Young chicks grow rapidly and need a balanced diet to ensure they are getting the correct nutrition.

ASSESSOR'S  
USE ONLY

**Mash**

**Crumble**

**Pellets**



Source: [https://sacredbee.files.wordpress.com/2011/05/100\\_44781.jpg](https://sacredbee.files.wordpress.com/2011/05/100_44781.jpg)

Feed type	Protein %	Fat %	Minerals %
Pellets	16	3	2
Crumble	20	4	1
Mash	16	3	1

- (c) Use the information provided above to select the most suitable feed for one-week-old chicks. Justify your selection by comparing and contrasting it with the other feeds.

In your answer, consider:

- the chicks' stage of development
- the nutritional requirements of young animals.

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**More space for this answer is available on the next page.**











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