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90921



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SUPERVISOR'S USE ONLY

Tick this box if  
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## Level 1 Agricultural and Horticultural Science 2020

### 90921 Demonstrate knowledge of livestock management practices

9.30 a.m. Wednesday 18 November 2020

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 2–12 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**

ASSESSOR'S USE ONLY

**QUESTION ONE: Sheep**

Administering pregnant ewes with 5-in-1 vaccine prior to lambing is a common management practice on sheep farms.

- (a) Describe THREE actions carried out when vaccinating pregnant ewes, and explain why each action should be carried out.

	Description of action	Explanation of why the action is carried out
<b>Action 1</b>		
<b>Action 2</b>		
<b>Action 3</b>		

Lambs grown for meat are often finished on a crop before being sent to the meat works.



Lambs grazing on chicory

- (b) Why would a farmer choose to finish lambs on a crop instead of pasture? Explain how this type of finishing affects lamb growth.

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Texel sheep are known for growing good quality meat. In order to produce lambs with good quality meat, a farmer can purchase either purebred Texel rams or purebred Texel ewes.

(c) Justify why a farmer would use purebred Texel rams rather than the purebred ewes.

In your answer you should consider:

- production rates
- meat yield
- the short- and long-term effects.

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**QUESTION TWO: Chickens and pigs**

- (a) Describe the effect that external parasites, such as mites or lice, have on young chicks, and explain how they can affect growth.

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Chickens are often grown indoors where their environment can be monitored and controlled.

- (b) Explain why farmers keep chickens indoors.

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Lactating sows must be fed appropriately.

- (c) Select the best feed for lactating sows, using the information provided in the table below. Justify your answer by comparing and contrasting it with the other feed types.

<b>Feed type</b>	<b>Protein (%)</b>	<b>Fat (%)</b>	<b>Fibre content (%)</b>	<b>Energy (MJME)</b>
<b>A</b>	11.0	1.8	18.0	13.2
<b>B</b>	19.5	3.5	12.7	14.4
<b>C</b>	16.5	2.4	17.2	13.0

In your answer consider:

- the feed requirements of lactation
- how the protein, fat, fibre, and energy is used by the sow
- how the digestive system of pigs is suited to your selected feed type.

Selected feed type:



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**QUESTION THREE: Dairy cows**ASSESSOR'S  
USE ONLY

Heat detection is a management practice carried out before artificially inseminating (AI) dairy cows.

- (a) Describe how heat detection is carried out in dairy cows, and explain how it shows when a cow is on heat.

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- (b) Explain the benefits of artificially inseminating dairy cows.

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Mastitis is a bacterial infection that affects the udder.

Mastitis can be managed by treating infected cows with antibiotics, and culling cows that repeatedly get mastitis.

(c) Justify why a farmer would use these two management practices to manage mastitis.

In your answer consider:

- production costs
- herd health
- short-term and long-term effects.

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**Acknowledgements**

Images from the following sources have been adapted for use in this examination:

**Page 2**

<https://www.agricom.co.nz/Files/Files/Public/Agricom/Guides/Choice-Chicory-Guide-for-Lamb-Finishing-EMAIL.pdf>, page 7

**Page 5**

<https://www.gourmetdirect.co.nz/blog/2018/09/12/chicken-coop-lowdown-free-range-chicken/>