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Level 1 Agricultural and Horticultural Science 2021

90921 Demonstrate knowledge of livestock management practices

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 2–14 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (X). This area may be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

QUESTION ONE: Pigs

Pigs are often drenched through an in-feed drench.

- (a) (i) Why do farmers drench pigs?

- (ii) Why would they choose an in-feed drench?

Terminal boars (known for rapid growth and fat-lay-down genetics) are bred with sows mainly so their desirable genetics are passed onto their offspring.

- (b) Explain why a farmer might, or might not, choose to breed from a terminal boar.

Weaner pigs can be fed once a day, twice a day, or have unlimited access to feed (ad-lib).

Pigs in a feeding shelter

- (c) Justify which feeding option you would recommend to a farmer. Compare and contrast it to one of the other feeding options.

Recommended option: _____

Other option: _____

In your answer consider:

- how the feeding options are carried out
- the costs
- production rates.

QUESTION TWO: Sheep

Ewes are often vaccinated pre-lambing.



- (a) Explain why vaccinating is carried out in ewes 3–4 weeks before lambing.

As lambs grow, the oesophageal groove begins to close and is no longer in use from around eight weeks of age, when the rumen is fully functional.



(b) Describe the oesophageal groove, and explain its purpose.

Self-shedding sheep, such as the Wiltshire breed, are starting to become more popular with commercial farmers.



Wiltshire sheep

- (c) Justify why a farmer would introduce a Wiltshire ram into an existing Romney flock to achieve a 100% self-shedding flock.

In your answer consider:

- costs and effectiveness
- short- and long-term effects on production.

QUESTION THREE: Cows

Artificial insemination (AI) is a common management practice for cattle.

- (a) (i) On the diagram below, **place an X** where you would recommend the semen be released from the pipette, if artificially inseminating a cow.



- (ii) Explain why the semen should be released at that location.

Cows are often body-condition scored prior to mating.

- (b) Explain the advantages of body condition scoring cows compared with weighing them.

Cows are typically mated in mid spring and calved in mid winter.

Pasture growth and animal requirement curves

- (c) Using the information in the graph above, justify when and why a farmer would give cows supplementary feed.

In your answer consider:

- the feed requirements of cows, and why they change throughout the year
- the nutritional value of supplementary feed.

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

QUESTION
NUMBER

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

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NUMBER

Acknowledgements

Content from the following sources has been adapted for use in this examination:

Page 3

Pigs feeding (photo) <https://www.nzpork.co.nz/images/pigbarn.jpg>

Page 5

Sheep being vaccinated (photo) <https://www.combiclamp.co.nz/wp-content/uploads/cc-vaccinating.jpg>

Page 6

Milk flow (diagram) https://www.agrivotage.co.nz/wp-content/uploads/2017/08/Calf-milk_feed-flow_web.jpg

Page 7

Wiltshire sheep (photo) <http://morrisonfarming.co.nz/wordpress/wp-content/uploads/2016/04/wilt3-1024x724.jpg>

Page 9

Reproductive organs (diagram) https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/images/g02015_fig01.png

Page 10

Pasture growth (diagram) <https://www.ruralnewsgroup.co.nz/images/sdf-dsmfmdsfs.jpg>

