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2

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Level 2 Agricultural and Horticultural Science 2021

91294 Demonstrate understanding of how NZ commercial management practices influence livestock growth and development

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	Demonstrate in-depth understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	Demonstrate comprehensive understanding of how management practices influence livestock growth and development in commercial production in New Zealand.

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 (✂). 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.

INSTRUCTIONS

This exam paper requires you to discuss THREE livestock species of **your choice**.

Choose **different livestock** for EACH of the three questions. Do not repeat information in your answers to different questions.

BEFORE choosing livestock, carefully read ALL the questions to ensure your selections will allow you to meet all the requirements.

QUESTION ONE: Shelter

Pigs

“... Many areas of New Zealand are unsuitable for large-scale systems of outdoor production. Even where environmental conditions are suitable, there will be periods of adverse weather and pigs need sufficient shelter provided to enable them to cope.

Select your livestock for this question. The livestock you select for this question must be different to those you select for Question Two and Question Three.

Livestock for Question One: _____

- (a) Describe how farmers provide shelter for your selected livestock, and explain how it improves their growth and development.

There is more room for your answer on the next page ►

(b) Analyse how providing shelter for livestock affects the economics of production and the quality of products.

QUESTION TWO: Feeding livestock**Smolt**

Smolt (young salmon) are fed small food pellets with proportions of protein and oil, which differ from the large pellets that are fed to growing salmon.



Select your livestock for this question. The livestock you select for this question must be different to those you select for Question One and Question Three.

Livestock for Question Two: _____

- (a) Describe the types of feed young stock are given, and explain how this affects their growth and development.

- (b) Compare and contrast how the types of feed and/or feeding management practices differ between young stock and adult stock. Discuss how feeding impacts on the growth and development of your selected stock. Make reference to how this affects the economics and timing of production.

There is more room for your answer on the next page ►

QUESTION THREE: Dietary deficiencies

Hens and eggs

Layer hens require a large amount of calcium in their diet to produce high-quality eggs. A hen deficient in calcium may produce eggs with soft shells. Pullets (young hens) are particularly dependent on having enough calcium as they approach their first laying season.



Select your livestock for this question. The livestock you select for this question must be different to those you selected for Question One and Question Two.

Livestock for Question Three: _____

(a) Describe how a specific nutrient or mineral deficiency can cause animal health problems, and explain how this affects the growth and development of your chosen livestock.

There is more room for your answer on the next page ►

(b) Explain how meeting the nutrient and mineral requirements for your livestock ensures optimal growth and development.

Justify your answer by referring to livestock health, and how it affects the quantity, quality, and economics of production.

Acknowledgements

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

Page 3

Image: <https://www.stuff.co.nz/business/108196821/countdown-sells-kiwi-free-farmed-fresh-pork-only>

Text: <https://www.mpi.govt.nz/dmsdocument/46048-Code-of-Welfare-Pigs>, page 11

Page 6

Image: <https://salmonfactwork.weebly.com/smolt.html>

Page 9

Image: <https://www.pinterest.nz/pin/209839663871910308/>

<https://i.redd.it/8nbtjf9knh421.jpg>

91294