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NZQA

Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 2 Agricultural and Horticultural Science 2025
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 2–8 in the correct order and that none of these pages is blank.

Do not write in the margins (░░░░). This area will be cut off when the booklet is marked.

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

Merit

TOTAL **14**

INSTRUCTIONS

Choose THREE **different** types of livestock to answer the questions.

Read ALL the questions first, so you can choose which livestock you will use to answer each question.

QUESTION ONE: Livestock health

Livestock for Question One: Sheep

Identify a specific health issue common in your chosen livestock.

Health issue: Parasites

(a)   Explain how the specific **health issue** impacts growth and development of your chosen livestock.

Parasites effect Sheep negatively in many ways, first off they make the sheep spend more energy on their immune system rather than growth and development of sheep, especially in lambs who need quicker growth but still lack a good immune system. Parasites can also damage the sheeps internal organs, further slowing all growth and development to put more energy into immunity, this reduces the growth and quality of meat, as well as reducing production increasing the time it takes for a sheep to fully develop and be ready for market

(b) Evaluate an effective management practice that could be used to prevent or control the chosen health issue in terms of **quantity** and **economics of production**.

Refer to growth and development to support your answer.

by using certain drenches on sheep, parasites can be removed and they can be healed effectivly, drench types and amounts can be chosen by doing a feacal egg count, measuring the amount of eggs in a sheeps fecal matter. depending on how many are found, drench must be used to remove the parasites. drench can be used to efficently than remove parasites from an entire heard, although parasites may remain on the grass in the padock they were in so it is suggested they are relocated. Drenching quickly removes parasites, removing any long-term costs that parasites would normaly bring with them. drench also allows quicker recovary, making the sheep grow and devilop quicker than if they had the parasites

QUESTION TWO: Livestock stress

Choose **different** livestock to answer this question.

Livestock for Question Two: Deer

Identify a management practice that would reduce stress in your chosen livestock.

Management practice: Correct feed

(a) Explain how the management practice would **reduce stress** in your chosen livestock to benefit growth and development.

using the correct feed is Important to reduce stress In deer, stress slows growth and development of deer as they use less energy on meat Production and maturity, by feeding deer the correct amounts of nutrients, such as protien, the deer will have less stress and will grow and develop quicker

(b) Justify the effectiveness of the management practice to improve **quality** and **economics of production**.

Refer to growth and development in your answer.

Using the correct feeds to reduce stress, allows the deer to focus energy on meat productions, which leads to much higher quality meats through growth and development as well as earning the farmer a larger profit for the higher quality meat sold

QUESTION THREE: Breeding

Choose **different** livestock to answer this question. It must be **different** from livestock used in Questions One and Two.

Livestock for Question Three: Cattle

Name a breeding management practice.

Breeding management practice: Artificall Incamination

(a) Explain how farmers carry out the breeding management practice for **growth and development** of their livestock.

Artificial Artificial Insemination (AI) is a process where sperm from a bull with desirable trailts is taken by a farmer and artificaly planted into a cows uterus, this leads to desireable offspring to be born by the cow, which normaly have traits such as quick growth, quaity meat and large carcass weights. this significanty speeds up the calves growth and development.

(b) Evaluate the effectiveness of this management practice to increase the **quantity** and the **timing of production**.

using AI, calves can have much quicter growth rates, allowing them to be sold off much faster than normal. This means the farmer can gain larger profits by selling at premium prices for quicker sales, having them on the farm for less time also means less production costs are required to get the calves to a sellable weight

this method can be slow however, as AI can only be done one cow at a time. This leads to high costs to do AI and ~~because~~ few calfs being born, depending on how many have AI

Merit

Subject: Agricultural and Horticultural Science

Standard: 91294

Total score: 14

Q	Grade score	Marker commentary
One	M5	The candidate has described how drenching is carried out to treat parasites in sheep with reference to carrying out faecal egg counts. The candidate has also explained, in some detail, how parasites have a negative impact on growth and development. However, there was no detail justification of the use of drenching in terms of quantity or economics of production.
Two	A4	The candidate has described how the correct use of feed in deer can reduce stress. The response lacks detailed reference to specific feed types or information around why a lack of feed causes stress. Reference to growth has been made.
Three	M5	The candidate has described how artificial insemination (AI) is carried out in cattle, with reference to sperm being placed in the uterus, and trait selection. They explained how these traits can increase growth and development in some detail, referencing carcass weight, selecting for faster growth rates and the time the animals spend on farm.