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91294



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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.

Achievement

TOTAL 10

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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:

Identify a specific health issue common in your chosen livestock.

Health issue:

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

B *I* U     

Fly strike effects lambs by latching on to a lambs dirty tail that may have manure on it and laying larvae that hatch and invest the lamb. This can also happen around the crotch area. This can slow down the lambs growth by making the lamb unwell and even leading to death making the lamb not meet its growth targets or slaughter weight.

(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.

B *I* U     

There are two management practices that can be used to avoid this fly strike. One is docking and one is crutching. Docking is where the farmer will get the lamb at a couple weeks old and put them all up a race, then pull them out and put a ring around their tails to cut circulation from the body to the tail this is to make it so they can feel the least amount of pain during this practice. There are three ways to dock a lamb, one is to after the ring is on cut the tails with a knife then let them go, this way is the most efficient way to do it. The second way is to leave the ring on till the tail falls off which causes the least pain but there is a chance of it getting off or breaking. The third way is with a hot blade where they cut it with a heated blade after the ring is on. By cutting the tail you are reducing the probability of the sheep manure getting stuck in its own tail for the flies to feast on. The second management practice is crutching where the sheep is sheared in the crotch area to prevent the same manure build up that happens in the tail. Crutching also helps in lambing for the lambs to find the teat better instead of there being a lot of wool in the way.

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QUESTION TWO: Livestock stress

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

Livestock for Question Two: freisian bull-beef finishing farm

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

Management practice: herd management

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

B I U     

Herd management is where on a beef finishing farm as the bulls grow older they are put into smaller herds to decrease the chance of fighting as the testosterone levels in bulls rise with age. These groups usually are around 40 bulls, this gives bulls enough paddock space to run if beaten and keep to themselves most of the time, this also helps with growth and development as they have less competition for food and more space to comfortably eat without stressing. Bulls are also sorted into weight classes to stop bullying on smaller bulls, the farmer weighs each bull and has a weight category in which they are put into to even out the peace instead of there being big bulls that can beat and even kill the smaller ones.

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

Refer to growth and development in your answer.

B I U     

The effectiveness of this of this practice is large as it helps to keep bulls happy and healthy as well as keep expenses on the farmers end lower as with more bulls in one paddock there is more pressure to break out and wreck the equipment such as gates or fences. The reason for this unease in bulls is because when they get older their testosterone increases and they become more territorial so will want to fight more to figure out who is boss. Smaller herds also help with reducing carcass bruising as when all of the bulls get to know each other then they are less likely to fight and injure each other. That is why weight categories are a thing is to stop herds having too big bulls or too small bulls that can get bullied and injured which can effect carcass quality and even end in the bull being put down.

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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:

Name a breeding management practice.

Breeding management practice:

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

B *I* U     

Deer farmers cross breed elk stags and red hinds to create a hybrid vigour that has better growth development. By doing this they are maximising the potential of the animal and getting the most weight gains for their animals.

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

B *I* U     

This management practice is very effective as it boosts growth and development compared to normal breeds which can help to meet growth targets better and ensure safety in weights. This can also help farmers with timing by keeping them on schedule and never being late for weight targets because of this hybrid vigour.

Achievement

Subject: Agricultural and Horticultural Science

Standard: 91294

Total score: 10

Q	Grade score	Marker commentary
One	A3	The candidate has described how docking and crutching can be used to prevent fly strike in sheep, showing a good level of understanding of both management practices. While their description is good, there is limited reference to how this has an impact on growth and development, or how crutching / docking increases growth rates.
Two	A3	The candidate has described how the size of bull herds can be used to reduce stress in cattle. Management practice is described but lacks clear detail about the links to stress and how this has either a positive / negative impact on growth and development. While reference has been made to competition for food, this is not clearly linked to an aspect of growth and development.
Three	A4	The candidate has described how crossbreeding two named deer breeds can have a positive impact on growth and development with reference to both hybrid vigour and growth rates. Limited explanation of how hybrid vigour or crossbreeding increases growth rates.