90921

909210

1

SUPERVISOR'S USE ONLY

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

Level 1 Agricultural and Horticultural Science, 2018

90921 Demonstrate knowledge of livestock management practices

9.30 a.m. Thursday 22 November 2018
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

© New Zealand Qualifications Authority, 2018. All rights reserved.
No part of this publication may be reproduced by any means without the prior permission of the New Zealand Qualifications Authority.

ASSESSOR'S USE ONLY

QUESTION ONE: DAIRY CATTLE

The majority of dairy cows in New Zealand are artificially inseminated (AI) by an AI technician.

(a) Describe THREE actions that are performed when artificially inseminating dairy cows, and explain why each action is carried out in that way.

Action	Explanation

Bovine viral diarrhoea (BVD) is a highly infectious disease in New Zealand cattle that can cause reproductive losses, reduced growth rates, and lowered milk production. Cattle with BVD cannot be cured, but they can be vaccinated to prevent them getting it.

(b) Describe what a vaccine is, and explain how it works to improve animal health.

ASSESSOR'S USE ONLY

In order to control bovine viral diarrhoea (BVD) in New Zealand, farmers vaccinate their cattle and cull any stock that are infected.

(c) Justify why vaccinating the herd and culling infected cattle prevents outbreaks and the spread of BVD.

In your answer, consider:

- short-term and long-term effects on herd health
- the effectiveness of controlling the disease
- overall farm production.

More space for this answer is available on the next page.

ASSESSOR'S USE ONLY

This page has been deliberately left blank.
The examination continues on the following page.

ASSESSOR'S USE ONLY

QUESTION TWO: SHEEP

Sheep need to be crutched / dagged (removal of wool from around the tail and between the rear legs) regularly.

(a) Explain how crutching / dagging improves sheep health.

Milk from sheep is a highly nutritious alternative to cow's milk. In New Zealand, milking sheep are farmed in a similar way to dairy cows and are milked twice a day.

Sheep-milking platform

Source: www.stuff.co.nz/business/farming/sheep/9441640/Milking-ewes-for-all-their-worth.

(b) Describe the feed requirements of lactating ewes, and explain why they differ from maintenance feed.

ASSESSOR'S USE ONLY

In order to increase the quality and quantity of milking sheep in their flock, a farmer can either buy in rams to breed with their ewes or purchase more ewes.

(c) Justify why a farmer would buy rams to breed with, rather than purchase ewes.

In your answer, consider:

- genetic potential
- short-term and long-term effects on production
- costs and efficiency.

ASSESSOR'S USE ONLY

QUESTION THREE: DEER

Female deer can get pregnant only when they are in season or "on heat".

(a) Describe what "on heat" means, and explain why deer can get pregnant only during this time.

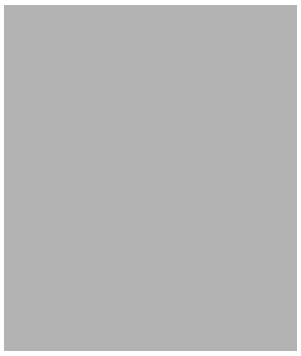
A farmer has decided to buy in grain and palm kernel expeller (PKE) to use as supplementary feed.

(b) Explain why it is important that deer are gradually introduced to these feeds.

ASSESSOR'S USE ONLY

Copper is an element essential for deer health, and often deer need more than they can get from their diet alone. In order to increase the amount of copper in a herd's diet, a farmer can either place a slow-release capsule down the throat into the rumen or mix a copper-rich solution into the water troughs.

Copper capsules



Source: https://www.bayeranimal.co.nz/en/products/products-details.php?id=993.

Deer at a water trough

Source: https://www.rainmakerwildlife.com/drinkers/.

(c) Select the better method for ensuring that deer get enough copper in their diet. Justify your selection by comparing and contrasting it with the other management practice.

Selected management practice: _____

In your answer, consider:

- effectiveness of each method
- labour and other costs
- long-term deer health.

More space for this answer is available on the next page.

ASSESSOR'S USE ONLY

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

QUESTION NUMBER

ASSESSOR'S USE ONLY

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

QUESTION NUMBER

ASSESSOR'S USE ONLY

90921