

90154



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

For Supervisor's use only

Level 1 Agricultural Science, 2009

90154 Describe livestock management and livestock physiology important to this management

Credits: Four

9.30 am Monday 16 November 2009

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 answer ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

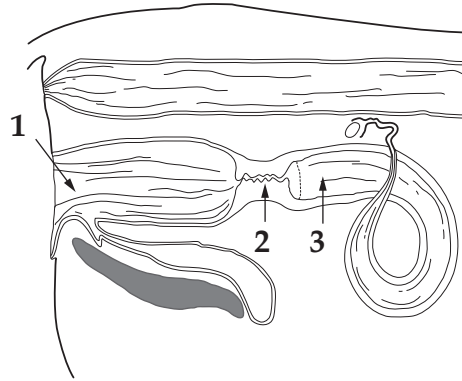
YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

<i>For Assessor's use only</i>		Achievement Criteria	
Achievement	<input type="checkbox"/>	Achievement with Merit	Achievement with Excellence
Describe the physiology of body systems important to livestock management practice(s).	<input type="checkbox"/>	Explain the physiology of body systems important to livestock management practice(s).	<input type="checkbox"/>
Describe livestock management practice(s).	<input type="checkbox"/>	Explain livestock management practice(s).	<input type="checkbox"/>
			Select and justify management practice(s) used to solve a livestock production problem. <input type="checkbox"/>
Overall Level of Performance (all criteria within a column are met)			<input type="checkbox"/>

You are advised to spend 40 minutes answering the questions in this booklet.

QUESTION ONE

The diagram below shows a cross section through a cow's **reproductive** system.



(a) (i) Identify the **reproductive parts** labelled 1, 2 and 3 in the diagram above.

(1) _____

(2) _____

(3) _____

(ii) Explain the **function** these structures have in reproduction.

(1) _____

(2) _____

(3) _____

(b) Calving problems occur on many dairy farms. A dairy farmer is considering the following management practices to reduce calving problems:

- selling all cows that have repeated calving problems, OR
- changing the level of nutrition to cows during pregnancy.

The farmer decided that **selling cows** with repeated calving problems is the best management practice to reduce calving problems in the future.

(i) Explain how this management practice reduces calving problems. In your explanation:

- describe the signs that a cow has calving problems
- explain how selling cows with repeated calving problems will reduce calving problems in the future.

QUESTION TWO

- (a) Explain how the **physical** and **chemical** conditions inside the cow's rumen help the bacterial breakdown of plant material.

- (b) A dairy farmer milking 400 cows is keen to increase milk production and can use the following management practices:

- supplementary feeding with grain or meal
- grazing cows on larger areas of leafy pasture.

- (i) Select the management practice you would recommend the farmer use to increase milk production.

Selected management practice: _____

Use this management practice to answer parts (ii) and (iii) below.

- (ii) Explain how this management practice **increases** milk production.

QUESTION THREE

Drenching is used to **control internal parasites** in heifer calves.

- (a) **Explain** how a drenching technique controls internal parasites. In your explanation:
- describe ONE step taken to ensure that **all** heifer calves receive the correct dose
 - explain why it is essential that **all** heifer calves receive the correct dose.

- (b) A farmer has noticed an increase in the number of cows with mastitis, a bacterial disease that reduces milk production. The farmer has the following management practices available to reduce the number of cows with mastitis:

- culling the infected cows
 - treating the herd with antibiotics such as penicillin at the **end** of the milking season.
- (i) Select the management practice you would recommend the farmer use to **reduce** mastitis in the herd.

Selected management practice: _____

Use this management practice to answer parts (ii) and (iii) below.

- (ii) Explain how this management practice **reduces** mastitis in the herd.
