2

SUPERVISOR'S USE ONLY

91294



Level 2 Agricultural and Horticultural Science, 2015
91294 Demonstrate understanding of how NZ commercial
management practices influence livestock
growth and development

2.00 p.m. Monday 23 November 2015 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.

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

TOTAL

QUESTION ONE: CALF REARING

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When rearing calves, the farmer aims for the calves to gain liveweight quickly, and convert them from a milk diet to being able to consume pasture.

Calves feeding at a milk dispenser



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Explain how promeal, increases	oviding calves with go their liveweight.	ood-quality nutritio	n through their m	nilk and feed, such
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New Zealand calf-rearers commonly use either once-a-day or twice-a-day feeding systems. ASSESSOR'S USE ONLY Compare and contrast the practices of once-a-day and twice-a-day feeding when rearing (c) calves. In your answer: describe the difference between once-a-day and twice-a-day feeding systems explain how these feeding systems impact on the calf's growth and development compare and contrast the two different feeding systems by their impacts on quality of calves reared and economics of production.

QUESTION TWO: INTERNAL PARASITE MANAGEMENT IN LAMBS

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Internal parasites such as worms reduce lamb growth and development. A farmer has decided to control internal parasites by using an integrated programme of running lambs on clean/safe pasture, and regular drenching.

Evaluate the effectiveness of this integrated programme for controlling internal parasites in lambs by explaining how it would increase growth rates and improve livestock numbers, and explaining its effect on economics of production.

In your answer:

- describe how ONE of the management practices, of drenching, or using clean/safe pasture, is carried out

explain now controlling internal parasites affects lamb growth rates evaluate the effectiveness of the integration of these management practices by explaining how greater growth rates improve lamb numbers to market, and explaining its effect on economics of production.

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QUESTION THREE: SUPPLEMENTARY FEEDING FOR LIVESTOCK

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In New Zealand, the majority of farms are pasture-based, with livestock being fed a supplementary crop during the winter months.

)	Explain how supplementary feed impacts on livestock growth and development during the winter months.

A farmer has decided to grow **fodder beet** instead of swedes or kale as their winter supplementary crop to feed to their beef cows.

Features	Fodder Beet	Swedes	Kale
Average yield (kg DM/ha)	18 000-22 000	10 000-12 000	10 000-12 000
Metabolisable energy (MJ/kg DM)	12	13	12
Disease tolerance	Very good	Variable	Very good
Insect tolerance	Very good	Moderate	Moderate
Cost to establish (\$/ha)	2000–2200	800–1000	800–1200

(b) Using the table above, justify the decision to plant fodder beet to maintain or improve the beef cows' liveweight, and the impacts that this has on the quality of the cows and economics of production.

In your answer:

- describe how the farmer would use metabolisable energy and dry matter (DM) values to determine what energy requirements are needed for their beef cows
- explain how fodder beet could maintain or increase the beef cows' liveweight
- justify the decision to plant fodder beet by explaining how maintaining or increasing the beef cows' liveweight improves both the quality of the cows coming out of winter and the economics of production.

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