

91294



912940



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

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

2

SUPERVISOR'S USE ONLY

Tick this box if  
there is no writing  
in this booklet

☐

# Level 2 Agricultural and Horticultural Science 2020

## 91294 Demonstrate understanding of how NZ commercial management practices influence livestock growth and development

2.00 p.m. Monday 30 November 2020  
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 2–16 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

**INSTRUCTIONS**

This exam paper requires you to discuss THREE livestock species of **your choice**, such as alpacas, cattle, deer, farmed insects, horses, poultry, salmon, or sheep.

Choose a **different livestock** for EACH of the three questions. Do not repeat information in your answers to different questions.

BEFORE choosing your livestock, carefully read ALL the questions to ensure that your selections will allow you to meet all the requirements.

**QUESTION ONE: Environment and climate**

The success of any farming enterprise is affected considerably by the climate and the environmental conditions.



Examples of different climates and conditions

**Selected livestock:** \_\_\_\_\_

- Environmental management practice (1): \_\_\_\_\_

Environmental management practice (2): \_\_\_\_\_

Agricultural and Horticultural Science 91294, 2020

- (b) By analysing the TWO management practices discussed in (a), justify which management practice you believe would have the greatest potential impact for your selected livestock, in terms of both quality and economics of production.

ASSESSOR'S  
USE ONLY



**QUESTION TWO: Breeding for quantity or quality**ASSESSOR'S  
USE ONLY

Twinning is highly undesirable in mares. The advent of ultrasound has allowed earlier detection of multiple pregnancies from around days 14 to 16 post breeding.

Crickets need heat to incubate their eggs until they hatch. After about two weeks (longer at lower temperatures), the eggs will start hatching and pinhead crickets the size of a grain of sand will emerge by the hundreds daily for about two weeks.

**Selected livestock:** \_\_\_\_\_

- Breeding management practice (1): \_\_\_\_\_

Breeding management practice (2): \_\_\_\_\_

Agricultural and Horticultural Science 91294, 2020

- (b) Justify the use of ONE of the breeding management practices discussed in (a), in terms of both timing and economics of production.

ASSESSOR'S  
USE ONLY





**QUESTION THREE: Stages of development and nutritional requirements**

Different species of livestock have important stages in their growth and development.



Paua are relatively slow growing and can take around four years to reach a commercial size.

Pigs are relatively fast growing and can reach slaughter weight in as little as 6–7 months.

Select **your livestock** for this question. The livestock you select for this question must be different to those you selected for Question One and Question Two.

ASSESSOR'S  
USE ONLY

**Selected livestock:** \_\_\_\_\_

- (a) Describe TWO feed management practices, and explain how these practices benefit livestock growth at TWO different stages of development in your selected livestock species. (One management practice for each stage of development.)

Feed management practice  
and stage of development (1): \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

Feed management practice  
and stage of development (2): \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

- (b) Select a specific stage of development and justify a feed management practice in terms of both quality and economics of production.

ASSESSOR'S  
USE ONLY



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

ASSESSOR'S  
USE ONLY

QUESTION  
NUMBER

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

ASSESSOR'S  
USE ONLY

QUESTION  
NUMBER

**Acknowledgements**

Material from the following sources has been adapted for use in this examination:

- Page 2** <http://www.dunstandowns.co.nz/library/slides/Home/mustering.jpg>  
[https://cdn6.nzgeo.com/1970/01/84\\_Deer\\_body112.jpg](https://cdn6.nzgeo.com/1970/01/84_Deer_body112.jpg)
- Page 6** [https://www.nzherald.co.nz/resizer/HpsMKNKIOxZuM8Rnc4ivQLHLqrs=/620x444/smart/filters:quality\(70\)/arc-anglerfish-syd-prod-nzme.s3.amazonaws.com/public/W3LQFZFTSBAXRMUMGWZG374USQ.jpg](https://www.nzherald.co.nz/resizer/HpsMKNKIOxZuM8Rnc4ivQLHLqrs=/620x444/smart/filters:quality(70)/arc-anglerfish-syd-prod-nzme.s3.amazonaws.com/public/W3LQFZFTSBAXRMUMGWZG374USQ.jpg)  
[https://www.newshub.co.nz/home/rural/2019/05/milestone-for-wairarapa-cricket-farm/\\_jcr\\_content/par/image.dynimg.full.q40.jpg/v1559005957820/SUPPLIED\\_cricket\\_getty\\_2852019\\_1120.jpg](https://www.newshub.co.nz/home/rural/2019/05/milestone-for-wairarapa-cricket-farm/_jcr_content/par/image.dynimg.full.q40.jpg/v1559005957820/SUPPLIED_cricket_getty_2852019_1120.jpg)
- Page 10** <http://www.lbaaf.co.nz/assets/images/Land-based-paua-farming-in-New-Zealand.jpg>  
[https://www.nzherald.co.nz/resizer/akGbu3moL5fF2amc6tgs2J-ZfZM=/620x349/smart/filters:quality\(70\)/arc-anglerfish-syd-prod-nzme.s3.amazonaws.com/public/IRH4VMYAHFG65GELIJSTRW7Q3E.jpg](https://www.nzherald.co.nz/resizer/akGbu3moL5fF2amc6tgs2J-ZfZM=/620x349/smart/filters:quality(70)/arc-anglerfish-syd-prod-nzme.s3.amazonaws.com/public/IRH4VMYAHFG65GELIJSTRW7Q3E.jpg)