

93105Q



931052



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

Scholarship 2014

Agricultural and Horticultural Science

9.30 am Thursday 20 November 2014

Time allowed: Three hours

Total marks: 24

QUESTION BOOKLET

There are **THREE** questions in this booklet. Answer **ALL** questions.

Write your answers in Answer Booklet 93105A.

Check that this booklet has pages 2–3 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

QUESTION ONE – NUTRIENT MANAGEMENT (8 marks)**Cattle in the Whanganui River**

For copyright reasons, this resource cannot be reproduced here. See: www.tongarirorivermotel.co.nz/wp-content/gallery/other-rivers_1/cattle-in-wanaganui-river.jpg (Accessed 23 March, 2014)

Algae growth in a river

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In a comment to Newstalk ZB on 21 November 2013, Jamie Falloon, President of the Federated Farmers Wairarapa, said, “There is a responsibility to resolve the water quality issues and we don’t shy away from that, but the key bit is to make sure the decisions are sensible, and that they don’t have unforeseen economic consequences for regional economies.”

Nutrients are an important input into agricultural and horticultural systems. However, there is increasing concern over contamination of waterways (rivers, lakes, and groundwater) from fertiliser and animal effluent, as illustrated by the photographs above. In response, regional councils are proposing nutrient loss limits on agricultural land.

Discuss the likely impacts of these proposals on a specific primary production system, and the potential economic and social effects on the various stakeholders.

Plan your answer to this question on page 2 of the Answer Booklet and begin your answer on page 3.

QUESTION TWO – ADDING VALUE (8 marks)

Adding value to a product is a key component of any primary production system.

With reference to TWO primary production systems:

- discuss how value is added to the primary products in their production systems
- evaluate the opportunities and challenges that adding value presents to the selected primary production systems.

Plan your answer to this question on page 8 of the Answer Booklet and begin your answer on page 9.

QUESTION THREE – CONTEMPORARY ISSUES (8 marks)

Choose TWO of the following contemporary issues:

- animal welfare
- biosecurity
- traceability
- food safety
- country of origin labelling.

For EACH of your chosen contemporary issues, and with reference to ONE primary production system:

- critically analyse the impact that the issue has had on the selected primary production system
- discuss likely future developments in regard to the issue, and the effects that these developments will have on the primary production system.

Plan your answer to this question on page 14 of the Answer Booklet and begin your answer on page 15.

