

93105Q



931052



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

## Scholarship 2009

### Agricultural and Horticultural Science

9.30 am Saturday 14 November 2009

Time allowed: Three hours

Total marks: 24

### QUESTION BOOKLET

There are three questions in this booklet. Each question is worth 8 marks. Answer ALL questions.

Write your answers in the Answer Booklet 93105A.

Show ALL working. Start your answer to each question on a new page. Carefully number each question.

For all questions, the answers should be written or drawn clearly with all logic fully explained.

Check that this booklet has pages 2–4 in the correct order and that none of these pages is blank.

You are advised to spend approximately 60 minutes on each question.

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

You have three hours to complete this examination.

### QUESTION ONE

The following two articles discuss the contemporary issues of traceability and climate change. Select ONE of these issues for your response to this question.

***EITHER:*** Traceability

***OR:*** Climate change

#### TRACEABILITY

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Source (adapted): <http://www.gen-i.co.nz/about/newsandevents/Pages/Traceability-a-Business-Imperative-for-Farmers.aspx>

## CLIMATE CHANGE

*For copyright reasons, this resource cannot be reproduced here.*  
Source (adapted): <http://www.mfe.govt.nz/publications/climate/impacts-agriculture-sep01/impacts-agriculture-sep01.pdf>

Select **either** Traceability **or** Climate change. Discuss the selected issue with reference to TWO primary production systems that you have studied.

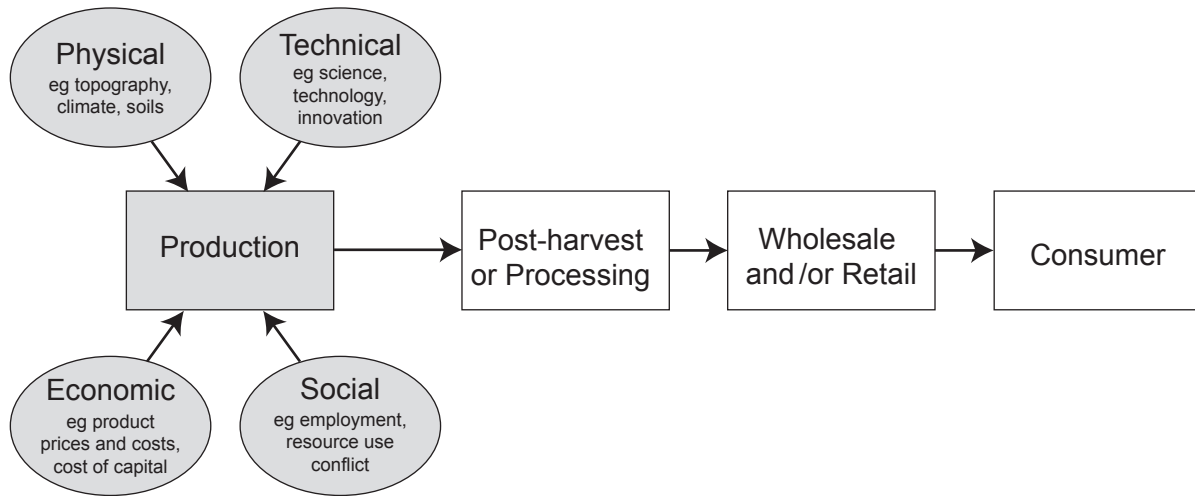
The discussion must include:

- an explanation of your selected issue
- an evaluation of why it is an issue in the wider primary production sector
- a critical analysis of how it impacts on your TWO primary production systems.

State your selected issue and TWO primary production systems at the start of your response.

## QUESTION TWO

**Figure 1: The production subsystem within the primary production system**



The major components of the **production subsystem** within the primary production system are highlighted in Figure 1.

Analyse how ONE nationally significant primary production system that you have studied is affected by specific contemporary issues.

Select the contemporary issues from:

- food miles
- market access
- food safety
- soil and water degradation
- biosecurity
- biotechnology.

In your analysis:

- identify and discuss at least TWO contemporary issues that are impacting **now** or that are likely to impact in the **future** on your chosen primary production system.
- discuss how the farmer/grower might respond in the management of the production subsystem to ONE of those contemporary issues, and the implications of those responses for the system as a whole.

State your nationally significant primary production system at the start of your response.

## QUESTION THREE

Discuss the **sustainability** of ONE primary production system with reference to:

- the balance of environmental, social, and economic considerations
- the impact of possible producer, industry/sector, and government responses.

State your selected primary production system at the start of your response.