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NZQA

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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SUPERVISOR'S USE ONLY

Level 3 Agricultural and Horticultural Science, 2014

91532 Analyse a New Zealand primary production environmental issue

9.30 am Monday 10 November 2014
Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Analyse a New Zealand primary production environmental issue.	Critically analyse a New Zealand primary production environmental issue.	Comprehensively analyse a New Zealand primary production environmental issue.

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 parts of the task 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

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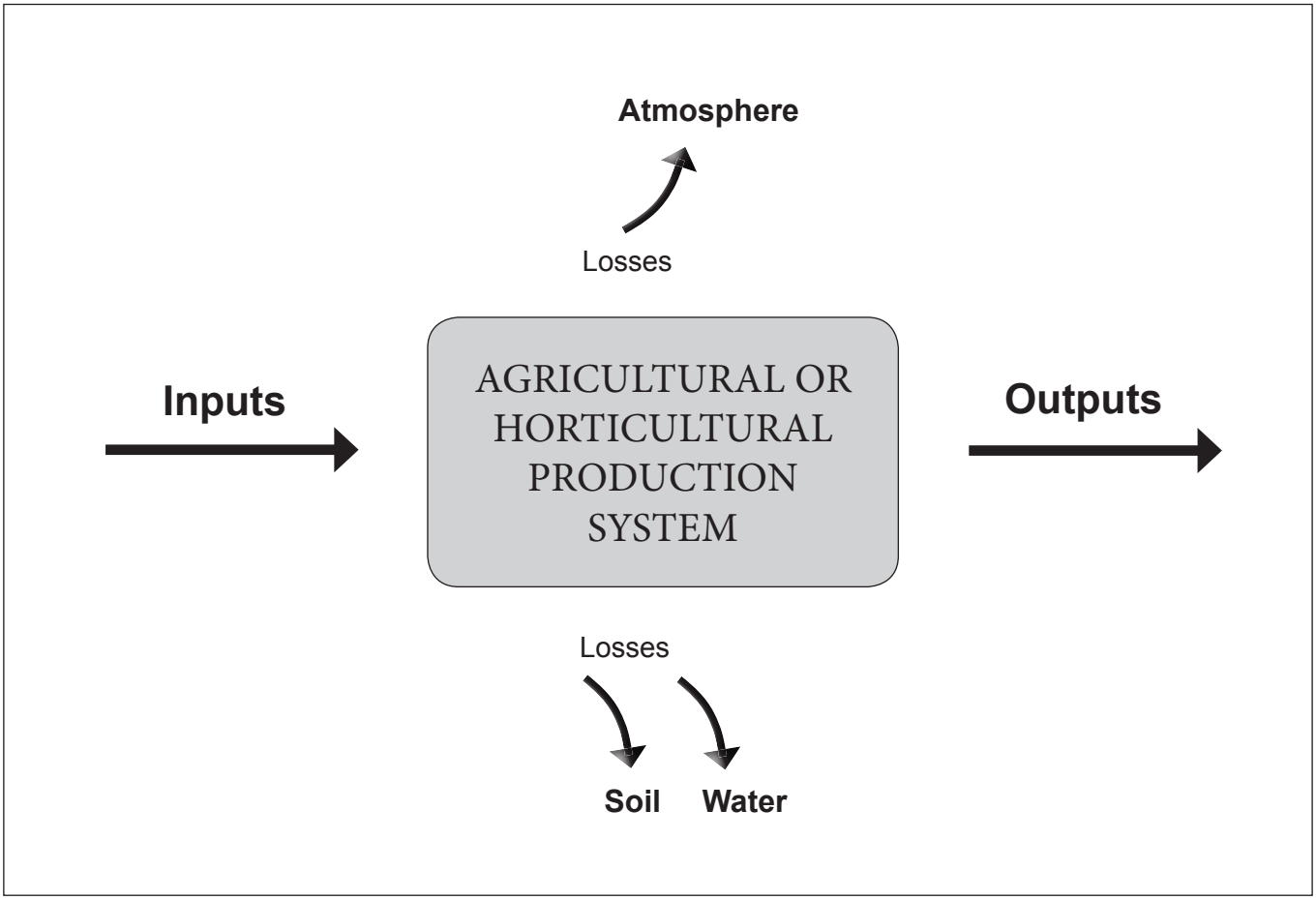
INSTRUCTIONS

Environmental issue
The management of nutrients in an intensive agricultural or horticultural production system.

This paper consists of ONE task, which examines this environmental issue in detail. Carefully read parts A, B, and C of the task, and Resource A below and Resource B on page 4, before you begin your answer.

RESOURCE A



PART A

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Nutrients can be gained and lost within an agricultural or horticultural production system.

Explain the effects on the environment that can arise from these gains and losses for a specific agricultural or horticultural production system, using Resource A to guide you. Name your specific intensive production system below.

Specific intensive production system: _____

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PART B

RESOURCE B

Technologies such as nitrification inhibitors are tools that New Zealand producers have used to reduce nutrient losses from agricultural and horticultural production systems. However, until DCD has been cleared as "food safe", it is no longer considered viable for managing nitrogen in food production systems.

DCD withdrawn from the marketplace

Nitrification inhibitors are products that prevent the oxidation of ammonium to nitrite.

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early 2013 after traces were found during routine milk testing.

Give an example of a management practice that could be used as an **alternative** to nitrification inhibitors for the management of nutrients, for a specific intensive agricultural or horticultural production system. Name and describe your selected management practice in the box below.

Management practice:

Description:

Explain how this method / technology can assist in the management of nutrients to minimise any negative environmental impacts.

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PART C

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Technologies other than nitrification inhibitors are being widely utilised to mitigate the negative impacts of nutrients in New Zealand agricultural and horticultural production systems.

Discuss the strengths and weaknesses of using your selected method / technology from Part B to address the environmental, social, and economic impacts of the nutrients used in this specific intensive agricultural or horticultural production system.

In your answer, you should compare your choice to alternative methods or technologies to support your reasoning.

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

QUESTION NUMBER

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