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Level 3 Agricultural and Horticultural Science, 2015

91532 Analyse a New Zealand primary production environmental issue

9.30 a.m. Monday 30 November 2015
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 BOTH 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 2–12 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

This paper consists of ONE task, in TWO parts (A and B), which requires you to analyse water storage and irrigation as a New Zealand primary production environmental issue.

PART A

RESOURCE FOR PART A

The Blue Springs

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See: http://www.gottalovenz.com/experience/the-blue-springs/

New Zealand's natural freshwater resources underpin the Kiwi outdoor lifestyle and our "clean and green" brand.

The adverse effects of agricultural intensification are well understood, and are unambiguously evident in the ongoing deterioration of water quality and quantity in an increasing number of waterways.

The irrigation industry wants to see the estimated 650,000 hectares of irrigated land increased to in excess of a million hectares within the next two decades.

Discuss the economic, environmental, and social impacts arising from the **use of irrigation** in agricultural and horticultural production systems.

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More space for this answer is available on the next page.

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This examination continues on the following page.

PART B

RESOURCE FOR PART B

Opuha dam in normal conditions

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Opuha dam in drought conditions

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The Opuha Dam was planned to drought-proof a large area of South Canterbury for many

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the means to store it in times of plenty, to use it in times of shortage," Wills said.

"If water storage schemes are to provide for greater agricultural intensification, it must be at

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direct and indirect freshwater environmental effects are benign."

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A key issue for discussion during the 2014 General Election was the availability and quality of water associated with increasing agricultural intensification in New Zealand.

Justify the use of water storage schemes, like the Opuha Dam, over other water extraction options, such as bore water and pumping directly from rivers and tributary streams.

In your answer, evaluate various stakeholder viewpoints and the environmental impacts.

More space for this answer is available on the next page.

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Write the question number(s) if applicable.

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