

3

91532



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

SUPERVISOR'S USE ONLY

Tick this box if
there is no writing
in this booklet

Level 3 Agricultural and Horticultural Science 2020

91532 Analyse a New Zealand primary production environmental issue

9.30 a.m. Thursday 26 November 2020
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 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

ASSESSOR'S USE ONLY

INSTRUCTIONS

This examination is made up of THREE parts. Carefully read ALL parts, and the information below, before you begin your answers.

You must answer ALL parts of this examination.

Space for planning is provided on page 3. Begin your answers on page 4.

TOPIC

How production systems and their management practices have changed over time to allow for more intensive production, often at the expense of environmental sustainability.

Choose a **specific** primary production system:

Primary production system: _____

Intensification of New Zealand's agricultural / horticultural practices is an ongoing process that potentially threatens the environment and even the sustainability of primary production. Intensification can be defined as a greater density of fruit tree planting or carrying more stock units per hectare. Increased use of nutrient and water inputs have accounted, at least in part, for the increased rate of food production. A potential negative consequence of this action has been environmental damage. Increasingly, these environmental impacts have come under the spotlight due to media attention. Producers must understand how to manage these impacts if they wish to retain their social license to farm.

Producers have been using fertiliser to produce their primary products since 1881. This management practice has changed a lot since then.

Irrigation is an important management practice carried out by producers to supplement natural rainfall and has changed over time.



Adding lime to the soil



Centre pivot irrigation machine

PLANNING

PART A: Management practices

Explain, in detail, TWO management practices carried out in the production of your chosen product, and how they have changed over time to allow for more intensive production.

Include specific data and examples.

Management practice (1): _____

PART B: Environmental, social and economic impacts

(i) Explain, in detail, the negative environmental impact(s) from carrying out your management practices (from Part A).

Include specific data and examples.

Environmental impact(s): _____

- (ii) Explain EITHER a social OR economic impact of carrying out one of your management practices (from Part A). The impact may be positive or negative.

Include specific data and examples.

Social or economic impact: _____

Acknowledgements

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

Page 2

(text) <https://www.tandfonline.com/doi/abs/10.1080/00288230809510453>

(images) <https://www.stuff.co.nz/business/farming/67541170/beneath-your-feet-5-tips-on-fertiliser-for-beginners>
<https://irritechchina.en.made-in-china.com/product/MygnuCholqce/China-Irritech-Latest-Agricultural-Machine-Center-Pivot-Irrigation-System-From-China-in-Christchurch-New-Zealand.html>