

93105Q



931052



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

Scholarship 2019

Agricultural and Horticultural Science

2.00 p.m. Friday 8 November 2019

Time allowed: Three hours

Total score: 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 2–4 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: SUSTAINABLE PRIMARY PRODUCTION AND CLIMATE CHANGE

Greenhouse gases are considered a key contributor to the climate changes that are being experienced both here in New Zealand and around the world.



OECD performance review

New Zealand's responsibility to the Paris climate change agreement

The Paris Agreement came into force on 4 November 2016 and will take effect from 2020.

This means New Zealand's commitment to reduce greenhouse gas emissions, our Nationally Determined Contribution (NDC), will apply from 2021.

New Zealand's NDC is to reduce greenhouse gas emissions by 30 per cent below 2005 levels by 2030.



- (a) Explain how agricultural and horticultural production systems contribute to New Zealand's greenhouse gas emissions.
- (b) With reference to ONE primary production system:
 - discuss the impacts (both positive and negative) that climate change presents to your chosen primary production system, and
 - explain the challenges producers face in order to overcome, or manage these impacts.

QUESTION TWO: CONSUMER PERSPECTIVES WITHIN THE GLOBAL ECONOMY

Discuss how consumer perspectives have guided innovation in the production and marketing of New Zealand primary products within the global economy.

In your answer, include specific examples to support your discussion.

QUESTION THREE: CHANGES IN LAND USE IN NEW ZEALAND**Shifts in land cover types, 1996–2012**

With reference to TWO primary production systems:

- evaluate the economic, social and environmental implications of land use changes in New Zealand over the past 20 years.

Acknowledgements

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

Page 2:

<http://www.oecd.org/media/oecdorg/directorates/environmentdirectorate/New-Zealand-1-sources-of-GHG-Twitter-green-background-800x401.png>

<https://global.unitednations.entermediadb.net/assets/mediadb/services/module/asset/downloads/preset/assets/2016/04/24198/image1170x530cropped.jpg>

<https://pixabay.com/vectors/cow-icon-cow-bos-taurus-farm-1653039/>

<https://pixabay.com/vectors/car-small-one-door-auto-black-310524/>

<https://www.brandeps.com/logo/O/OECD-01>

<https://www.mfe.govt.nz/climate-change/why-climate-change-matters/global-response/paris-agreement>

Page 3:

Our Land 2018, Ministry for the Environment publication, Figure 11, Page 41,
<http://www.mfe.govt.nz/publications/environmental-reporting/our-land-2018>