

93105Q



931052



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

Scholarship 2020

Agricultural and Horticultural Science

2.00 p.m. Monday 16 November 2020

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 2–6 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: The future sustainability of primary production


With reference to ONE primary production system, analyse its future sustainability in terms of economic, social and environmental factors, or considerations.



QUESTION TWO: Global trade disruptions / changes

Disruptions to global trade are often the result of political agreements or disagreements between countries. These have implications for New Zealand's trade and, ultimately, the production and profitability of our primary production systems.

With reference to TWO New Zealand primary production systems, discuss the threats and opportunities that these global 'events' present.



QUESTION THREE: The position of genetic modification in New Zealand's primary production sector

- (a) Explain what genetic modification (GM) is.
- (b) Discuss the opportunities GM may offer or provide to New Zealand's primary production sector, and the challenges it presents.

Include specific primary product examples to support your discussion.

Assorted views on New Zealand's current stance on GM and GE



- The government's outgoing science adviser says we're long overdue a serious chat about genetic engineering (GE),

Source: (adapted from)

<https://www.newshub.co.nz/home/new-zealand/2018/07/nz-needs-to-rethink-genetic-engineering-stance-experts.html>

- **Stressors** are the environmental factors that cause stress. They can be physical, chemical, or biological in nature. Examples include noise, pollution, and overcrowding.

Source: (adapted from)

<https://thespinoff.co.nz/science/02-10-2018/nzs-pig-headed-rejection-of-gm-is-putting-our-agricultural-future-at-risk/>

Time to build a moat around this country, and go GMO-free!

- If New Zealand adopts genetically modified organisms (GMO), we will gain incremental increases in productivity.

Because once you allow GMO, you can't go back.

Source: (adapted from)

<https://www.stuff.co.nz/business/farming/109225845/time-to-build-a-moat-around-this-country-and-go-gmofree>

Acknowledgements

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

Page 2

(image) <https://www.guide-natura.com/sv-SE/om-oss/h%C3%A5llbarhetsarbete-41587255>

Page 3

(text) <https://2.bp.blogspot.com/-g56E3YJI4ME/Wz9pG8Yxl6I/AAAAAADQyA/E8cDHblgeYrfaD4m7GFNFdVgaiHbmVDQCLcBGAs/s1600/Screen%2BShot%2B2018-07-06%2BBat%2B6.04.33%2BAM.png>

(image) <https://www.newshub.co.nz/home/money/2020/02/how-brex-it-will-impact-new-zealand.html>

(image) <https://www.newshub.co.nz/home/world/2019/10/boris-johnson-s-brex-it-deal-passes-second-reading.html>

(image) <https://commons.wikimedia.org/wiki/File:CNN.svg>

(image) <https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cptpp-ptpgp/index.aspx?lang=eng>

Page 4

(image) <https://www.gefree.org.nz/>

