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93105Q



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Scholarship 2023 Agricultural and Horticultural Science

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: Reducing greenhouse gases in New Zealand's primary sector

Select a primary production system.

State what key greenhouse gas (GHG) emissions are produced from that system, and discuss the costs and challenges of GHG and carbon mitigation.

In your discussion consider the production, processing, and distribution aspects of the system.

QUESTION TWO: Growing New Zealand's agri-food exports

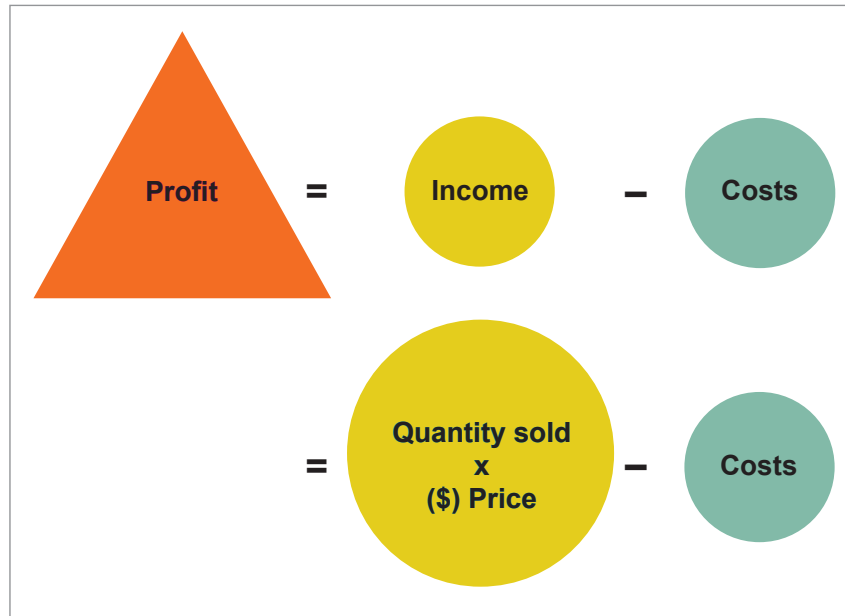
In 2012, the New Zealand Government set itself a target of doubling the value of agri-food exports between 2012 and 2025.



There are four main sources of potential export value growth.

- Increased physical production.
- More value-adding of commodities into premium consumer products.
- Producing new products through the use of agri-food technology.
- Increased product prices.

For ONE primary production system, discuss the growth of export value that has been achieved over the past decade and the potential for future growth.

QUESTION THREE: Primary production profitability and rising costs

In relation to TWO primary production systems:

- (a) Explain the options producers have in order to maintain profitability in the face of rising input costs.
- (b) Discuss the future viability of the product and its production given the current operating environment.

Possible considerations may include access to new technology, regulatory compliance, market access, climate change, and consumer demand.

Acknowledgements

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

Page 2

(graph) <https://stats.wto.org/>