

No part of the candidate evidence in this exemplar material may be presented in an external assessment for the purpose of gaining credits towards an NCEA qualification.

3

91530



915300



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

Level 3 Agricultural and Horticultural Science, 2018

91530 Demonstrate understanding of how market forces affect supply of and demand for New Zealand primary products

2.00 p.m. Tuesday 27 November 2018
Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how market forces affect supply of and demand for New Zealand primary products.	Demonstrate in-depth understanding of how market forces affect supply of and demand for New Zealand primary products.	Demonstrate comprehensive understanding of how market forces affect supply of and demand for New Zealand primary products.

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 the questions 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.

Excellence

TOTAL

22

ASSESSOR'S USE ONLY

INSTRUCTIONS

This assessment requires you to answer questions related to at least TWO distinctly different primary products. Note the following points.

1. Select your primary products and write them in the box below. **Before** doing this, however, carefully read ALL of the questions in this paper to ensure that your selection will allow you to meet ALL the requirements of the questions.
2. The primary product for your discussion of supply (Question One) **must** be different from that for your discussion of demand (Question Two).
3. At least ONE of your selected products must gain significant export earnings for New Zealand producers.

Choice of market forces affecting product **supply** for discussion in **Question One**:

- price received by the grower
- production costs
- weather events.

Choice of market forces affecting product **demand** for discussion in **Question Two**:

- exchange rate
- consumer preference
- reliability of supply.

Question Three asks you to discuss how sanitary and phytosanitary regulations affect the supply of, and demand for, a New Zealand primary product. This may be a product you have already used, or a different product.

SELECTION OF PRIMARY PRODUCTS

Primary product (1) for discussion of supply: Lamb

Primary product (2) for discussion of demand: Apples

Primary product for discussion in Question Three: Apples

Note: In your answers, use specific examples, including recent units and values where appropriate, to help explain how market forces affect supply and demand – e.g. volume of product, typical costs, and returns to producers.

QUESTION ONE: Market forces affecting the supply of primary products

ASSESSOR'S
USE ONLY

Note that the product you have chosen for discussion in Question Two cannot be used for this question.

Primary product (1): Lamb

Explain the impact of TWO of the market forces listed below on the supply of your product.

Price received by grower Production costs
Weather events

In your answer:

- select TWO of the market forces from the box above, and explain the relative importance of each to the supply of the product
- select the market force that has the greater effect on the supply of your primary product, and justify your selection, using data and evidence as appropriate.

Weather events are an important market force that has an importance on the supply of lamb. The 2012-2013 drought effected the whole of the North Island and the West Coast of the South Island. It was the worst drought to hit these areas in over 40 years. The cost to the New Zealand economy was \$1.3 billion and farmers incomes decreased by an average of \$300,000. The drought had a flow on effect to the supply in the 2014 season. Lamb numbers fell by 1% from 20.3 million head in 2013 to 19.95 million head in 2014. Lamb numbers in the South Island also fell by 2.6% ^{on the previous year}. The drought effect feed availability which meant mating wasn't as successful and ewes were lighter. This caused fertilisation

rates to drop and therefore there were less quantity of lamb. Farmers held onto their lambs for longer to build them up to their average carcass weight ^{between 17-20kg}. This effected supply because farmers were sending less lambs to be slaughtered. Lamb numbers fell meaning there was less lamb to be supplied to the market.

Price received by the grower is an important market force ^{on the supply of lamb} because farmers are less likely to supply their lamb if the price is low. After the 2012-2013 drought the price dropped from \$110 in 2011 to \$85 in 2013. This was due to less lamb being supplied to the market and the lambs being of a lower weight. The lamb was of lower quality meaning the consumers didn't want to purchase the product. In 2017 the price rebounded to be at \$105 which is the highest price since 2011. The price is high due to their being less global inventory of lamb. Supply of lamb is still low at 357,000 tonnes ^{produced} exported. Beef and Lamb Confidence Survey shows our confidence levels have reached 59%. This means that they are confident we can consistently supply good quality.

E8

QUESTION TWO: Market forces affecting the demand for primary products

ASSESSOR'S
USE ONLY

Note that the product you have chosen for discussion in Question One cannot be used for this question.

Primary product (2):

Apples

Demand for a product can often be influenced by more than one factor.

For your second selected product, identify TWO market forces from the box below that impact on demand, and explain the relative importance of each of these forces.

Exchange rate

Consumer preference

Reliability of supply

In your answer:

- select TWO of the market forces from the box above, and explain the relative importance of each to the demand for the product
- select the market force that has the greater effect on the demand for your primary product, and justify your selection, using data and evidence as appropriate.

Consumer preferences are an important market force that has an importance on the demand of apples. If we supply the consumers the product they want, they are more likely to buy it. The industry is constantly developing new apple genetics. This is to keep up with the demand of the evolving palates of consumers worldwide. Consumers demand that apples are of good quality and are free from pests and diseases. Jazz apples have been developed to appeal to the Asian market. They are sweet in taste, bright red in colour and crunchy. The Asian market was demanding something new so we

had to find an alternative. The Chinese market currently imports 41% of our apples. The Asian market have gone away from the traditional Braeburn apples ^{because they found them too bland}. The consumers in Asia demand these apples as we are following their consumer preferences.

Reliability of supply is an important market force that has an importance on the demand of apples. Consumers demand New Zealand apples because we are reliable when we supply good quality apples. China has ^{had a} decrease in apple production by 25% due to frosts in April. They are confident that New Zealand can supply them excess. It is expected that our apple exports to China will reach 50% in the next 5 years. This is a rise from 41% currently. New Zealand is seen as the number 1 apple industry in the world for the past 4 years. They have beaten both USA and Chile to this title. The New Zealand apple industry is expected to be a billion dollar industry by 2022. This shows how the demand for our apple is continually increasing. Consumers can be confident that

[E7]

QUESTION THREE: Biosecurity and New Zealand's primary products

RESOURCE A

At the heart of the world trading system is the World Trade Organization (WTO). Tariffs and quotas have for many years been the biggest barriers to trade. These are continually being reduced through negotiations in the WTO.

Measures to protect against the spread of diseases and pests by traded goods may also be barriers to trade. The Sanitary and Phytosanitary (SPS) Agreement is about how to apply sanitary (human and animal health) measures and phytosanitary (plant health) measures in a way that does not unnecessarily restrict trade.

Due to steadily increasing volumes of international trade and travel, all countries, New Zealand included, need to be more vigilant than ever against pests and diseases that threaten the health of their people, animals, and plants. Likewise, countries rightly expect the food they import to meet their own standards of safety.

Source (adapted): <https://www.mpi.govt.nz/dmsdocument/12576-balance-in-trade>.

RESOURCE B

The boxes below provide some examples of current or recent biosecurity issues.

Preventing foot-and-mouth disease

New Zealand is officially recognised as being free of foot-and-mouth disease (FMD).

Our geographical isolation and strict border controls reduce the risk of an outbreak of FMD in New Zealand.

Milk powder exports

In 2013, China halted imports of all milk powder from New Zealand and Australia after bacteria related to botulism were found. This raised food safety concerns and threatened New Zealand's \$9.4 billion annual dairy trade.

Bees as pollinators and honey-makers

The varroa bee mite affects agriculture and horticulture in two ways:

- directly, in the beekeeping sector; and
- indirectly, in sectors that benefit from honey bee pollination.

Varroa is likely to cost New Zealand at least \$400 million and possibly as much as \$900 million (in present value terms) over the next 35 years.

WTO win for NZ apples

In 2007, New Zealand challenged Australia's apple quarantine measures, which had prevented our apples from being exported to Australia for nearly 100 years, due to an alleged risk of fireblight.

A country's sanitary and phytosanitary regulations can become a non-tariff trade restriction for New Zealand exports of primary products.

ASSESSOR'S
USE ONLY

Discuss how both the supply of, and demand for, a New Zealand primary product of your choice is, or could be, affected by regulations imposed in New Zealand, or in other market destinations.

The demand and supply of New Zealand apples could be affected by regulations imposed in New Zealand and other overseas markets. For the apple industry they are threatened by many pests and diseases including fireblight. Consumers demand apples that are free from chemicals and blemishes. New Zealand wants to provide their exporters with good quality apples that are produced in a sustainable way. New Zealand borders have strict biosecurity and phytosanitary regulations for products entering our country. They go through a thorough check because any pest or disease could effect our supply of apples. ^{to the world market} The UK market has introduced the sustainable use of pesticides regulation. This means that any apples exported to their country ~~could~~ have to follow the regulations. They want to decrease the use of pesticides in order to meet the demands of consumers.

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

These regulations could affect the supply of apples to the UK. This because if we don't follow the regulations we won't be able to supply. The apple futures programme was also introduced by the UK in 2008. It's new technology that surveys fruit to tell the grower if it needs to use chemicals for a disease. They are aiming to reduce residues on apples. The programme has ~~reduced~~ ^{less than} apple residues to ~~under~~ 10% ~~of~~ the UK regulations. The less chemicals and residues on fruit the more the consumer will demand. Consumers want to know that apples are produced in a sustainable way. A disease to affect the apple industry will decrease supply and demand. New Zealand will have to decrease supply due to it not being of high quality. It will not meet the regulations for the level of pesticide allowed to be used. Consumers will lose confidence in the ~~apples~~ ^{exported} from New Zealand and therefore demand will decrease. Apple Futures is a great programme that will help growers when to use chemicals. Phytosanitary regulations are important.

Extra space if required.

Write the question number(s) if applicable.

ASSESSOR'S
USE ONLYQUESTION
NUMBER

1. produce to the market. Farmers are more likely to supply their lamb when the price is high. In 2017 lamb numbers were still low which pushed the price up.

The market force that has greater effect on supply of lamb is weather events. This is because the drought of 2012-2013 caused lamb numbers to drop by 1%. This means there was less lamb to be supplied to the market. Feed availability also impacted supply because it meant ewes were lighter. This meant that farmers held onto their stock for longer. Price has less of an impact on the supply of lamb. This is because farmers still have to supply their lamb when it reaches the carcass weight. The price can fluctuate depending on demand and the global inventory levels.

2. we will continue to produce a high level of apples. This is due to the apples being grown in various areas of New Zealand such as

Extra space if required.

Write the question number(s) if applicable.

QUESTION
NUMBER

as the Hawkes Bay and Nelson. Here there is a warm climate, minimal wind and rain.

The market force that has greater effect on the demand of apples is consumer preferences. If New Zealand can meet the evolving palates of consumer, then the demand will remain high. The price of apples has reached \$35/tonne in 2017 from \$27/tonne in 2013. If we change and evolve the genetics then consumers are prepared to pay more for what they want. Reliability of supply has less of an impact on ^{the} demand of apples. This is because New Zealand will constantly supply the countries with exports. Increasing production doesn't mean you are meeting the preferences of consumers however.

3. for the importer and consumer. It's important for people's health and the sustainability of the industry.

Excellence Exemplar 2018

Subject	Level 3 Agricultural and Horticultural Science		Standard	91530	Total score	22
Q	Grade score	Annotation				
1	E8	The candidate provided detailed and well written evidence on TWO market forces, and their influence on the supply of their chosen primary product. Their response included supporting data throughout. The answer demonstrated a clear understanding of the market forces, and their effect on the supply of lamb.				
2	E7	The candidate provided detailed and well written evidence on TWO market forces, and their influence on the demand of their chosen primary product. Their response included supporting data and examples throughout. The answer demonstrated a clear understanding of the market forces, and their effect on the demand of apples.				
3	E7	The candidate has provided a detailed and well-written response of how the supply and demand for apples is affected by sanitary or phytosanitary regulations. The candidate shows in their response they have detailed knowledge of the apple industry and the effect non-tariff barriers can have on the industry. The evidence provided in the candidate's response is their own, not relying or rewriting from the resource material.				