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91530



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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 3 Agricultural and Horticultural Science 2023

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

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 parts of the task 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 2–11 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (DO NOT WRITE). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

Excellence

TOTAL 08

INSTRUCTIONS

Carefully read ALL the instructions and parts before answering.

You must answer the different parts using TWO different primary products – Primary product (1) and Primary product (2).

The primary products chosen must earn significant export revenue in their processed or unprocessed form, or allow for self-sufficiency within New Zealand.

Different primary products are required for parts (a) and (b). Part (c) should be answered using the primary product used in either part (a) or part (b).

In addition, you must use THREE different market forces from the list below.

Market forces

- Political intervention
- Production cost
- Price
- Market trends
- Consumer preference
- Promotion
- Quality requirements



Beef

PLANNING

USA = 220,000T

Low exchange rate - positive for us.

As of May largest export to US.

Increase in demand in US (weather + herd reduction).

Decrease in Chinese demand poor economic state.

Kiwifruit

Asia

Surge = 95 million trays

Vit C - 3x orange

Higher brix than green.

Suits Asian palate (sweeter).

↓
\$736 million
exp. rev.- \$2.1 B
total.Strong global fruit
market.Zespri
licenses
biggest.

11% decrease in yields

20% orchards destroyed.

75% expenditure on
labour.

Better quality - lower quantity.

TASK: How market forces affect supply and demand

Name a primary product, and select a market force from the list on page 2.

Primary product (1): Kiwifruit (Sun Gold).

Market force (1): Quality requirements.

- (a) How has your selected market force affected the **supply** of your named primary product? Use recent data to support your answer.

The market force of quality requirements has significantly affected the supply of Sun Gold kiwifruit to be exported. Zespri licenses and sells Sun Gold kiwifruit in New Zealand, and Zespri are in fact the largest kiwifruit marketing organisation in the world. Because of this, Zespri have a reputation to manage and uphold, and therefore have strict quality requirements which must be met, if a piece of fruit is to be exported. The kiwifruit which Zespri exports must be 'Class 1'. This means that they have passed vigorous testing to ensure that they are the right shape, the right size, the right firmness and colour, as well as having the right brix level and importantly no blemishes or bruising.

Only exporting Sungold kiwifruit which are class 1, is essentially why Asia loves our Sungold kiwifruit and imported ~~as~~ ⁹⁵ million trays of them ~~in the year ended 2022~~ ^{in the year ended 2022}. With a strong global fruit market this is expected to increase to 100 million trays for the financial year ended 2024.

Significant weather events in New Zealand including cyclone gabrielle and a severe hail storm in April, have caused damage to a large percentage of our fruit, meaning that less will be at / meet the quality requirements required for Zespri to export them. It is estimated that around 20% of all orchards in the Hawkes Bay and Christchurch regions were damaged during cyclone gabrielle, and a number of orchards in Te Puke were hit hard by a hail storm in April. It is expected the annual national yield will be down 11% for kiwifruit, which shows the extent of the damage. These events cause bruising and blemishes to fruit, and a percentage of them can no longer meet the quality requirements to be exported, meaning fruit quality requirements have decreased the supply of Sungold kiwifruit to be exported from New Zealand.

Name a **different** primary product to discuss, and select a **different** market force from the list on page 2.

Primary product (2):

Beef.

Market force (2):

Market trends.

- (b) How has your selected market force affected the **demand** for your named primary product? Use recent data to support your answer.

My selected market force of market trends has affected the demand for NZ Beef in the USA. In May of 2023, the US became the country which NZ exported the largest amount of beef to. For the year ended 2022 this totalled a whopping 220,000 tonnes. The US surpassed China, who have had a decrease in demand for our beef, due to their poor economic state at the moment. The US has had to reduce their herd numbers due to weather events, and therefore, their demand for our New Zealand Beef has increased dramatically. It is becoming increasingly common for consumers in

the USA to demand a, 'paddock to plate,' story if you will. They value the fact that an animal has been slaughtered for their consumption, and following the market trend, want to know more about this animal. New Zealand Beef is highly attractive to US consumers following this market trend, as a huge majority of our beef is grass-fed / pasture fed and we are known globally to have a 'clean-green' image, so to speak. Consumers would prefer the products from an animal which has had a good quality life living on and grazing on ^{open} pastures, while in the USA a large portion of the beef which they produce is barn housed and grain fed. The market trend which this correlates with is that people are both more environmentally concerned, and concerned about animal welfare standards. A recent SOR (Situation and Outlook for the Primary Industries) report showed that 65% of consumers would rather shop ^{responsibly} than not, which is ^{as for NZ} a step in the right direction. Therefore, ^{in NZ} market trends affect the demand for NZ beef in the USA.

Answer this part using either primary product (1) or primary product (2).

Primary product: Kiwifruit - SunGold

Select the market force from the list on page 2 that has the most **significant impact** on **supply and demand** for your chosen primary product. It must be **different** from the market forces used in parts (a) and (b).

Market force (3): Consumer preference

- (c) Justify your selection by discussing how your selected market force impacts both the **supply of and demand for** your chosen primary product.

In your answer you should:

- use recent data
- explain the significance of this market force for supply and demand
- explain why the significance is greater than that of the market forces chosen in parts (a) and (b).

My selected market force of consumer preference impacts both the supply and demand of SunGold kiwifruit. SunGold kiwifruit has become exceedingly popular in the Asian export markets (inclusive of China, Japan, Taiwan). Around one quarter of our total kiwifruit export revenue is generated from this market and we sell 20% of our kiwifruit here. In 2022 95 million trays of SunGold were exported to China alone. There are multiple reasons as to why the popularity of this fruit has taken off in China, but the main reason is that

generally speaking, Asian cultures demand a much sweeter fruit to satisfy their sweeter palates. This consumer preference causes an increase in demand for SunGold kiwifruit in China, as SunGold is sweeter with an export brix level of ~~13~~ ¹³ brix or above, while green is around 8-11% ^{brix}. Another reason why the ~~SunGold~~ kiwifruit has exploded in popularity in China, is that it has around three times the amount of vitamin C ~~than~~ than a single sweet orange. The consumer preference of a higher vitamin intake therefore increases the demand for SunGold kiwifruit in China. Zespri has identified this increase in demand, and has highlighted the fact they need to increase their supply of SunGold kiwifruit to meet this demand. Even taking into account the 11% reduction in yield from weather damage, it is ~~the~~ forecasted that NZ will export 100 million trays of SunGold to China in 2024, and therefore there has been a ~~increase~~ increase in supply by at least 5 million trays to meet the demand in China caused by

Extra space if required.
Write the question number(s) if applicable.

QUESTION
NUMBER

C Their consumer preferences. This highlights to me, that the supply is heavily linked to demand. If there is strong demand for a product, in this case Sun Gold kiwifruit, it is in the graners ^{best interest} in this case Zespri, to increase supply and meet this increased demand. Therefore, it is clear that the consumer preferences in the Asian markets which I have just highlighted have a direct and significant impact on both the demand and supply of NZ Sun Gold kiwifruit which is to be exported to China. The market force of consumer preference stood out to me as being of the greatest significance out of any of the other provided market forces - as ultimately, it is what the customer wants. If a 'good' doesn't meet the consumer preference, it simply ~~won't~~ ^{will not} sell! - meaning

Extra space if required.
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QUESTION
NUMBER

c. That the demand will decrease for it, and if the producer has any sense the supply for it will subsequently decrease in the year/season following. This means that consumer preference has a direct link to both the supply and demand of Singold kumfruit. In comparison, the market force which I selected in 'a', quality requirements, has a big impact on the supply of kumfruit, as if it doesn't reach the standard for export it cannot be exported. And likewise if fruit is not at a certain standard, demand will likely drop, however it is my opinion that because there is a domestic market for these 'class 2' kumfruit to be sold in, the market force of quality requirements is not of as greater significance as consumer preference. Similarly, Market trends, part b, do impact the supply and demand of kumfruit, but market trends typically follow consumer preferences, and therefore, consumer preference is the market force of greatest significance regarding Singold.

Excellence

Subject: Agricultural and Horticultural Science

Standard: 91530

Total score: 08

Q	Grade score	Marker commentary
One	E8	The candidate provided an explanation of how quality requirements affects kiwifruit supply with supporting evidence in data. The candidate then explained how market trends affect the supply of beef with data and other supporting evidence. In Part C the candidate justified consumer preference being the most significant market force. They made links between the demand and the supply of the product. They compared it to their other market forces. They used supporting evidence.