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NZQA

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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.

Merit

TOTAL 16

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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: Milk

Primary product (2) for discussion of demand: Apples

Primary product for discussion in Question Three: Milk

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

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

Primary product (1): Milk

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 can have a big impact on the supply of milk. ~~Excessive rain may cause~~ Supply is the amount of a product that a producer can provide to the market. Many things can effect the supply of a product to a market and when it comes to growing things, weather plays a big part. From the amount of sunshine hours to the amount of rainfall, weather can decide how much is produced and therefore how much is supplied. To produce milk, dairy farmers need to grow grass. To grow grass a certain amount of photosynthesis is needed. This requires sunlight and water. A good example that shows how much weather can effect the supply of milk is the fact that in 2014 NZ experienced a drought which obviously caused a lack of grass. During that year, NZ's export of milk products ~~that is ~~part~~ of our milk~~ amounted to about $14 billion, however in the previous years and the years following, the amount NZ

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received for exports was about $18 billion. This is because the drought caused a lack of gress and a lack of gress caused a lack of production and therefore less supply. Production costs are also important in the production of milk and its supply. If for example a lack of gress meant a farmer is required to purchase more grain and bylage to try and keep up supplying the same amount, it may not work as the cost of supplementing feed could cause the production costs to become too high for the farmer and thus a lack of profit, means that the farmer drops his supply. If a farmer will not recieve enough of a profit ~~to~~ due to high production costs to keep supplying the same amount, he may not see that it it is worth it and instead just supply less in an attempt to keep his production costs down but his profit high. I believe that weather events have a greater effect on supply than production costs. There may not be many big weather events but when there is, farmers struggle with supply. However all of the small weather events, will end up affecting supply overall. Weather events also can effect production costs. If their is no gress, due to a drought, production costs will rise as extra irrigation and supplement feeding comes into place. It's because weather events can so easily effect production costs that I believe it overall has the greater effect on supply of milk.

M5

QUESTION TWO: Market forces affecting the demand for primary products

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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.

Demand is the amount a consumer will buy of a product. The reliability of supply can easily effect the demand of apples. If the amount of supply changes, it is likely that the costs of apples will change. For example if a bad season means that supply is lessened, then this will cause the price of apples to rise as the producer will need to cover the costs of a bad season. When the cost rises, the demand drops as consumers are only willing to pay what they feel the product is worth to them. When demand is equal to $ supply we reach market equilibrium. However due to the reliability of supply or possible unreliability, this causes changes in demand Because apples are exported and imported between countries, so countries in their off season can still eat apples (from other countries), the supply is quite reliable making an easily demanded

product for the cost. We can see that the demand of apples and supply has grown overseas as NZ used to export $350 million worth of apples in 2013. However we now export double the amount at $700 million Consumers can rely on their supply Consumer preference also plays a big part in demand of apples. In certain countries, a certain colour and size would be normal for them and therefore that is what they prefer. Most consumers will also prefer apples that are not bruised and thus could definetly effect the demand as apples are easily bruised on their trip overseas. However some consumers may prefer those cheaper bruised apples ~~as the~~ for things like treats for their horses or baking. So I believe consumer preference does not affect demand as much as the reliability of supply due to the fact people have many different tastebuds and uses for apples that it is likely for them to all be demanded However supply always affects demand as it affects costs and consumers are only willing to pay a certain price. Therefore the reliability of supply, means costs stay low and demand stays high.

M5

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.

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.

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The regulations put in place to combat mycoplasma bovis in dairy cows producing milk would've had an ~~big~~ impact on supply and demand of milk. NZ has required that if a cow on a farm has the disease then the entire property of cows must be culled, and the milk dumped. There are also strict sanity regulations in place to prevent spread of the disease. The death of around 30,000 dairy cows would have caused a dramatic drop in the supply of milk to the market. This in turn would have increased the price of milk and other dairy products. The supply of milk would've also been restricted by the sanitary regulations, halting the movement of stock (and sale) around some areas. This means farmers can't buy in more cows to produce more milk. Demand also may have lowered as some consumers become wary of the disease and their milk being contaminated.

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

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M6

Merit Exemplar 2018

Subject	Level 3 Agricultural and Horticultural Science	Standard	91530	Total score	16

Q	Grade score	Annotation
1	M5	The candidate provided evidence on TWO market forces, and their influence on the supply of their chosen primary product. ONE of the market forces was completed to Merit level. The candidate provided a detailed response that demonstrated a good understanding of how weather events can affect the supply of milk, giving examples of specific events. The candidate provided a weaker response as to how production costs affect the supply of milk, giving little detail. For an excellence, the candidate will need to provide a stronger justification
2	M5	The candidate provided evidence on TWO market forces, and their influence on the supply of their chosen primary product. ONE of the market forces was completed to Merit level. The candidate provided a detailed response that demonstrated a good understanding of how weather events can affect the supply of milk, giving examples of specific events. The candidate provided a weaker response as to how production costs affect the supply of milk, giving little detail. For an excellence, the candidate would have needed to provide a stronger justification
3	M6	The candidate has provided a response of how the supply and demand for milk is affected by sanitary or phytosanitary regulations. The candidate understood specific issued faced by the dairy sector, giving examples of restrictions on stock movement, stock sales, culling stock etc, and how these are going to affect the supply of milk, and therefore the demand for milk. The candidate did not just use information from the resource, they used the resource as a starting point for their response. Comprehensive detail is required for an Excellence.