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91530



915300



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Level 3 Agricultural and Horticultural Science, 2019

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

2.00 p.m. Monday 11 November 2019
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 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

08

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INSTRUCTIONS

This examination is made up of THREE parts.

Carefully read ALL instructions and parts before answering.

You must answer ALL parts of this examination.

You must answer the different parts using TWO different primary products. The products chosen must be ones that earn significant export revenue in their processed or unprocessed form, or allow for self-sufficiency within New Zealand.

Identify your two products:

Primary product (1):

~~Lamb~~ Wool

Primary product (2):

Lamb

Choose from the following list of market forces when answering Part A and Part B.

Market forces:

- Promotion
- Weather events
- Exchange rates
- Consumer preferences *
- Market trends

PART A: MARKET FORCES AFFECTING SUPPLY

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Market forces can influence primary producers' willingness or ability to **supply** their product to market.

Some market forces will have a greater influence than others, affecting the supply of your specific product.

Low wool count. ~~low, making of meat~~ ~~from FMFFHMPH~~
 Explain in detail how a market force (from the list on page 3) has affected the supply of your chosen Primary Product (1). Use specific examples, including recent units and values where appropriate. Wool low grade kg = \$3.20 ~~2-5 kg per sheep~~

Market force: Markets Exports

80's = 40 million sheep, Now = Below 20 million.

The rise and fall and potential rise again of ~~the~~ NZ wool is a prominent example of how markets trends can impact the willingness of primary producers to supply their products. As of the current moment of 2019, the wool is not considered a very worthwhile product, due to the low price that it commands (about \$3.20 per kg for low count micron wool). Since the 70's the price of wool has essentially stayed flat, resulting in ever larger portions of sheep and beef farmers converting ~~or~~ to other forms of land use (e.g. dairy and forestry). With ~~at~~ the advent of affordable synthetics, wool has steadily become less and less desirable, hence the ~~lack of~~ price stagnation. ~~This~~ ~~econo~~ ~~now~~ The impact of this market trend is best illustrated by the decline of sheep numbers in New Zealand since 1986. At that point there were over 40 million sheep spread out across the country, & in 2019 there are under 20 million sheep left, a reduction of over 50%. Producers will

$$3.20 \times 2 = 6.40 \times 1000 = 64,000$$

$$3.20 \times 25 = 16 \times 1000 = 160,000$$

not continue to supply a product to a market that does not want it. At \$3.20 a kg, with an average Romney producing between 2-5kg of wool, a farmer will only have an income of between \$64,000 - 160,000 for a 1000 strong mob of sheep, before operating expenses. The fact of the matter is that market trends are a principal reason for declining sheep numbers and wool exports (although NZ is still ranked 9th globally, ^{in sheep numbers} ~~decline~~ environmental concerns are another factor). However, if the market dictates that no money is to be had in wool, then the market can also dictate that there is money to be had in it. With growing environmental awareness, the use of synthetics is beginning to be frowned upon by some. Placing itself as a clean, green and all natural product, NZ wool has the opportunity to target niche markets that will offer a premium for our wool. New industries such as ~~the~~ woolaid (a wool plaster) seek to overturn the ~~the~~ dominance of oil-based synthetics. Should the price of wool rise once more, then there will be an increasing willingness for farmers to supply the global and national markets with wool. The price must be high enough for them to justify it though.

PART B: MARKET FORCES AFFECTING DEMAND

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Market forces can influence consumers' willingness to **demand** primary products.

Depending on the market force, the demand may increase or decrease for your primary product.

OR score of 2 (5-10 mm) Feb

Lean, cheap cuts of a certain size > 2.5kg

Explain in detail how a market force (from the list on page 3) has affected the demand for your selected Primary Product (2). Use specific examples, including recent units and values where appropriate.

NZ lamb = \$120 head
CW = 17.5 kg - 21.0 kg

Market force:

~~Lamb~~

Consumer preferences

Perhaps the most important market force in relation to the demand for lamb, consumer preferences dictate the type of lamb that producers now attempt to grow. Globally there has been a shift since the 1970's, lean and high quality or and cheap lamb has been the dictator of market demand. In an effort to meet the preferences of the paying individual, NZ lamb farmers now grow lambs that are relatively lean, with good marbling (hence good flavour) and produce cuts that are tender and cheap. The whole sector has become increasingly regimented and controlled in an effort to reach this goal. ~~However~~ In order for lambs to be considered lamb, it must be ~~no older~~ ^{no older} than 12 months (otherwise it is a hogget), resulting in cuts that are both tender and of an easily cookable size (under 2.5kg for a rod) due to the young age of the animal at slaughter. Leanness, marbling and rapid growth is most greatly due to appropriate genetics, leading to a dramatic increase in the number of hybrid prime lamb. The ~~father~~ ^{father} of these lambs are increasingly terminal sires, who are

purposely selected for ^{the} ~~this~~ very qualities that farmers wish for them to pass onto their offspring. This and the growth rates due to hybrid vigour have led to farmers increasingly relying upon such stock, many of which are ~~the~~ of the Texel breed. With the right genetics as well as the right raising, farmers are now capable of rearing lambs that conform to all of the consumer preferences; under 12 months, have a GR score of 2 (5-10mm of fat), good marking throughout & are capable of reaching a live weight of 40-48 kg with an eventual CW of 17.5-21.0 kg after processing. Following all of these criteria will lead to the perfect ~~market~~ ^{grades} lambs, which falls within the export ~~criteria~~ ^{requirements} of FM, FH, PM, PH. Although it something of a hassle to follow such ~~export~~ ^{requirements}, because the consumer has been offered this ideal product they are prepared to pay a premium for NZ lamb, in march 2019 farmers were rearing \$120 a head, whilst in the early 2000's that figure was only \$90.

PART C: POLITICAL INTERVENTION

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As a trade-dependent economy, geographically distant from export markets, New Zealand is a firm supporter of free and open trade. We have one of the most open market economies in the world.

Source: <https://www.mfat.govt.nz/en/trade/nz-trade-policy/>

Since the establishment of the World Trade Organisation (WTO) in 1995, New Zealand's trade policy has been informed by two key assumptions:



- Global market openness will continue to increase.
- The rules-based trading system (of the WTO) will strengthen and expand.

At the start of 2019, developing tensions in international trade are challenging those assumptions. We now see a trend of increasing global protectionism, e.g. uncertainty in New Zealand's trade with the UK and EU during Brexit negotiations; tensions between China and America over controversial Huawei telecommunications contracts, and New Zealand balancing our trade position between both.

As a country that relies heavily on trade and access to intended markets, New Zealand takes this situation seriously.

Source: (adapted): https://www.mfat.govt.nz/assets/FTAs-in-negotiations/UK-FTA/International-Trade-Rules_0.pdf

Discuss the significance and impact of **political intervention** on the supply and demand of ONE of your selected primary products. Use specific examples, including units and values where appropriate.

While the ~~the~~ lamb production of most nations is ~~sup. produced~~ to supply the national market, New Zealand ~~has~~ ^{is in} a unique situation, with 92% of our lamb production being exported and worth over \$2 billion NZD, our nation is especially vulnerable to the impacts of political intervention on trade. Our two main markets are the UK and the EU, followed by North America and a rapidly growing Chinese market. In 2018-19 NZ shipped over 550,000 tonnes of lamb to the UK and 120,000 tonnes to China.

In both of these markets there ^{is} ~~are~~ a significant risk of political intervention impacting our supply and the demand for NZ lamb. With the ongoing Brexit negotiations between the UK and the EU, there has been increasing thinking on the trade relationship to exist between our two nations. Brexit will reduce British trade with the European Union, or at least make the process more difficult. As such, the UK is looking ~~to~~ to better enter ~~the~~ global trade, forging its own links with other countries. This is where New Zealand lamb enters the equation, with reduced supply from the traditional EU markets, our lamb has the opportunity to expand our share of the market, especially given a free-trade deal that is being negotiated. NZ lamb has the opportunity to fill the gap that ~~a~~ was once held by ~~EU~~ subsidized EU lamb and cannot be filled by British lamb. Essentially, New Zealand should be able to ~~increase~~ ~~a~~ export more than 550,000 tonnes of lamb in the future. The UK is an attractive market, with ~~the~~ a wealthy population, British consumers are willing to buy the more expensive chilled and boneless cuts of lamb that we produce. The fact that our production of lamb is highest when there is lowest (spring, northern vs southern hemisphere) (NZ lambs born in August are roughly 5 months old at Christmas).

There is more space for your answer on the following page ►

with many ^a saleable weight), results in higher prices per kg at Christmas and Easter, when their demand is highest).

One of our fastest growing markets for Lamb, China presents a different challenge for our exports.

Demand for NZ lamb is high and rapidly growing, in 2018-2019 we exported 120,000 tonnes with a rough per tonne price of \$8,000, whereas in the 90s our exports was near nil.

However, unlike the UK which is a democratic and traditional ally of NZ, China is no such thing. As a Communist state, the Chinese government is entirely capable of preventing other countries from continuing trade as a political tool. With growing tensions between the USA (another of our allies) and China there are likewise growing fears that the Chinese may one day halt our growing trade as a way to blackmail our government. China does not need New Zealand, they gain imports from elsewhere. The issue is that, as we export 92% of our lamb, we must have ~~export destinations~~ ^{markets} that will buy our lamb.

e.g. they might not like one of our policies so they shut the market down. Further example is what happened between the US and China with Huawei, a trade war erupted.

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

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QUESTION
NUMBER

C. otherwise farmers will be unable to sell their product and then lose money. Our increasing lamb exports are essentially increasing our reliance on Beijing's ^{approval} ~~approval~~ for money, lest they shut us out of the market. It is a dangerous economic and political move to make, tying much of our lamb production to a market that is ~~slowly~~ slowly controlled by fickle 'Friends'. We must walk a ~~thin~~ tight rope to ~~not~~ offend ~~our~~ the Chinese or the Americans.

In concluding, the NZ supply of lamb to many nations, particularly the UK and China is heavily influenced by political intervention, resulting in changes to supply and demand. In the UK's case it appears to be of benefit to us, yet in the Chinese case it could have ramifications on the lamb industry. As such a trade dependant economy, the lamb industry is dependant upon our access to other markets.

Excellence Exemplar 2019

Subject	Agricultural and Horticultural Science		Standard	91530	Overall grade	08
Q	Grade	Annotation				
1	E8	In this question the candidate explained both market forces in detail. They used supporting data throughout their responses. The Excellence part of the question was discussed in detail, where the candidate used lots of data to support their viewpoint. The response showed a clear understanding of Political Intervention.				