

Assessment Schedule – 2024

Agricultural and Horticultural Science: Demonstrates understanding of how market forces affect supply of and demand for New Zealand primary products (91530)

Assessment Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<i>Demonstrating understanding</i> involves explaining how market forces affect supply of and demand for New Zealand primary products.	<i>Demonstrating in-depth understanding</i> involves explaining in detail how market forces affect supply of and demand for New Zealand primary products.	<i>Demonstrating comprehensive understanding</i> involves analysing how market forces affect supply of and demand for New Zealand primary products, with a focus on the significance and impact of the market forces.

Evidence

TASK	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	<p>How has the selected market force impacted the supply of your chosen product?</p> <p><i>The supply is likely to be represented by a change in quantity, timing, or attributes of the primary product.</i></p> <p>Seasonality – e.g. lamb</p> <p>New Zealand has distinct seasons and has the benefit of spring supplying good quality pasture growth. A few other countries have similar climates and experience similar seasons, but there are not that many, so this creates an advantage for us to be able to grow grass-fed red meat. Lambing dates vary across the country, due to differing regional climatic factors. Lambing is timed to match this, e.g. Hawkes Bay in July, and Central Otago in October. Lambs take 5–8 months to reach slaughter weight (40+kg LW). Therefore, the increase in supply of lamb starts in early December through to May, with the peak supply occurring in February. Approximately 2.2 million lambs were slaughtered in 2023.</p>	General response lacking specific supporting evidence or data.	Explains in detail and uses relevant data to support evidence.	

	<p>Production costs – e.g. dairy cattle</p> <p>On average, farm costs increased by around 13% during the past two seasons (2021 / 22 and 2022 / 23), and around 33% over the past three years. Costs have risen by about a third, wiping off the \$3/kg milk solids (MS) debt that has been repaid over the past few years. It was calculated for 2022 / 23 that the break-even point of \$8.48/kgMS was needed to cover farm working expenses, debt servicing, drawings, depreciation, and tax. It was calculated that farm working expenses had increased \$1.56/kgMS between 2020 / 21 and 2022 / 23. The two items facing the largest expenditure costs are feed, which is projected to have increased 19%, and fertiliser, up 30% in 2022.</p> <p>Price received – e.g. kiwifruit</p> <p>In the 2021 / 22 season, the average green kiwifruit returned \$75,494 per ha (\$6.35 per tray), with SunGold returning \$176,026 per ha (\$11.51 per tray). This meant that global sales for Zespri exceeded \$4 billion, up 12% from the previous season. However, tray returns for 2022 / 23 were slightly lower at \$6.13 and \$9.81 respectively with return per ha being \$61,304 and \$135,377. This reflects a challenging period, with the grower returns being down due to fruit quality issues because of weather, along with cost increases.</p>			
(b)	<p>How has the selected market force impacted the demand for your chosen product?</p> <p><i>The demand is likely to be represented by a change in quantity, or the prices paid, for the primary product.</i></p> <p>Promotion – e.g. Rockit apples</p> <p>In 2021, Rockit Apple reported a 94% increase in apple sales to China. Rockit Apple is expected to achieve a fourfold increase in the number of apples it exports across the world. The secret to Rockit Apple’s success is simple – to be different. While most other companies were super-sizing, Rockit Apple created perfectly sized small apples and packed them in a unique tube packaging. In 2023, in collaboration with the franchise Pokémon, the company launched a 12-week campaign to celebrate Children’s Day on 1st June in China. This promotional campaign enabled Rockit Apple to connect with millions of new consumers who are looking for innovative brands that are fun and engaging for all ages.</p>	<p>General response lacking specific supporting evidence or data.</p>	<p>Explains in detail and uses relevant data to support evidence.</p>	

Quality requirements – e.g. merino wool

High-quality merino has good staple length (60 to 95mm), high strength (25 to 55 N/ktex), low VM (vegetable matter) to 1.3%), and good style. However, the most important quality requirement is the micron, which generally ranges from 24 down to 11. When it comes to quality, merino is measured by its micron, not its weight, i.e. the lower the micron, the finer the merino and the higher the price. Using fibres 18.5 micron and less makes the fabrics soft and able to be worn comfortably against the skin. Using fibres of less than 17.5 microns becomes too costly due to their price. The very fine micron merinos are woven into premium quality suiting fabric. For mid- and outer garments, where durability is more important than softness, Merino with a higher 21 micron is used.

Quantity available – e.g. eggs

Quantity of eggs available fell 9.1% in 2022 to 92 million eggs (101 million in 2021) and is the lowest level of egg production since 2016. This fall was the largest annual decrease seen in the past 20 years. Due to the flexibility of use, taste, and nutritional benefits, eggs are a staple food in the New Zealand diet. Each New Zealander consumes approximately 237 eggs per year (2021 data), amongst the highest per capita consumers of eggs in the world. It is the change in New Zealand's egg production methods that saw the available egg numbers decrease considerably in 2022, and prices rise in response to sustained demand for eggs, exacerbating already-high inflationary pressures on food prices. While demand from customers will influence the shelf price paid, that demand is also reflected to egg producers who are competing to produce. Due to the demand remaining for eggs, with a lower supply, some businesses have indicated that their suppliers cannot meet their demand, so are reducing the quantity of baked goods they sell, or seeking replacement products, i.e. powdered eggs.



<p>(c)</p>	<p>Discuss the significance and impact that consumer preference has on ensuring future supply of, and demand for, your chosen primary product.</p> <p><i>The supply is likely to be represented by a change in quantity, timing, or attributes of both the primary products. The demand is likely to be represented by a change in quantity, or the prices paid for both primary products.</i></p> <p>Consumer preference – e.g. red meat</p> <p>Consumer ‘willingness to pay’ (WTP) research provides evidence that consumers of New Zealand food exports will pay a price premium for sustainability. This can increase returns to domestic red meat producers, and this premium received can offset the costs of providing these consumer preferred attributes. The highest WTP is for certified organic products (31% premium) and the lowest WTPs are for traceability (18% premium) and for a broad ‘environmentally friendly’ claim (19% premium). In both UK and Chinese markets, being grass-fed ranked above being environmentally friendly. The targeting of the conscious consumer or foodie by understanding their preferences is crucial to ensure that demand for the product is there and that they are also willing to pay the premium that ensures profitability for those producers. Consumers in the USA are now able to purchase USDA-approved Net Carbon Zero Angus beef from Silver Fern Farms (SFF). SFF has been supplying the US market grass-fed product for four decades and has a reputation for a quality product, with the ‘Net Carbon Zero By Nature’ just the next step in its aim to be climate positive by 2050.</p>	<p>General response lacking specific supporting evidence or data.</p>	<p>Explains in detail and uses relevant data to support evidence.</p>	<p>Comprehensively discussed.</p> <p>The answer will be well reasoned, with supporting data included.</p>
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N1	N2	A3	A4	M5	M6	E7	E8
<p>Partially explains ONE market force.</p>	<p>Partially explains TWO market forces.</p>	<p>Explains TWO market forces in general terms (one market force may be weaker).</p>	<p>Explains TWO market forces in general terms.</p>	<p>Explains in detail ONE market force (using recent data and / or other evidence).</p> <p>AND</p> <p>Explains ONE market force in general terms.</p>	<p>Explains in detail TWO market forces (using recent data and / or other evidence).</p>	<p>Explains in detail TWO market forces (using recent data and / or other evidence).</p> <p>AND</p> <p>Consumer preference is fully explained, and either supply OR demand is discussed comprehensively, with the other partially discussed.</p>	<p>Explains in detail TWO market forces (using recent data and / or other evidence).</p> <p>AND</p> <p>Consumer preference is fully explained, and supply AND demand are discussed comprehensively.</p>

N0 = No response; no relevant evidence.

Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0–2	3–4	5–6	7–8