

Assessment Schedule – 2025

Agricultural and Horticultural Science: Demonstrate 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, with quantitative data.	<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	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	<p><i>How has the selected market force impacted the supply of your chosen product?</i></p> <p>Market manipulation – SunGold kiwifruit</p> <ul style="list-style-type: none"> • Manipulation can occur at multiple stages of the supply chain, from production and export to distribution, potentially distorting the equilibrium of supply and demand. • Market manipulation may involve price-fixing agreements or collusion among growers, distributors, or exporters. By artificially controlling the price or limiting the quantity of SunGold kiwifruit available in the market, stakeholders can create an illusion of scarcity, leading to higher prices. Lowering of overall supply through artificial scarcity is when lower volumes of kiwifruit are made available despite adequate production. This limits market access and can drive consumer demand. • Control of supply through licensing saw Zespri release fewer licences to grow the gold variety in 2024. Two hundred and fifty hectares of SunGold kiwifruit licenses were to be released in 2024, down from 350ha in 2023. The decision to release a reduced number of SunGold Kiwifruit hectares acknowledged the constraints its supply chain was experiencing, balancing this with the need to increase SunGold production to meet the growing demand for its fruit. The number of licences sold was expected to lift in the future. From 2026 through to 2028, Zespri's board has approved an indicative range of 350–500ha of SunGold kiwifruit licences per year. Additional onshore packing and cool store capacity will need to be built in the coming two to five years to absorb that future growth. 	General response, lacking specific supporting evidence or data.	Uses relevant data to support evidence.	

Weather events – Lamb

Drought (2020) or extreme dryness (2023) can influence the supply of lamb through:

- reducing pasture growth, resulting in lower lambing rates and slower growth, which can delay the time it takes to bring lambs to market weight
- early culling of ewes, resulting in fewer breeding animals, which results in fewer lambs in the following season
- lowering lambing rates due to drought causing stress to the ewes, leading to lower fertility rates and smaller litter sizes, further reducing the number of lambs born in the season
- estimated lamb production for Marlborough-Canterbury remaining at 3.6 million head for 2024–25. However, Beef + Lamb New Zealand (B+LNZ) estimate 14,000 fewer lambs due to the residual effects of the drought on ewe breeding.

Cyclones (e.g. Cyclone Gabrielle), extreme storm events, flooding, and heavy rainfall can influence the supply of lamb through:

- severe storms causing livestock losses due to injuries or hypothermia, especially for young lambs; high winds and cold temperatures can result in sheep being trapped or unable to seek shelter, leading to high mortality rates
- cyclones and heavy storms washing away topsoil or destroying pasture, which may take months or even years to recover, leading to a dip in lamb production
- sudden cold spells (e.g. September snow in Southland) harming lamb survival rates, particularly for newborns or those close to birth. More than 25,000 lambs were impacted. Cold weather increases the risk of hypothermia and frostbite, particularly if sheep and lambs are not provided with adequate shelter. Lambs born in these conditions may also have lower survival rates or require additional care to reach market weight
- cyclones and heavy storms causing erosion, washing away topsoil or destroying pasture, leading to long-term damage to farmland. Of the grazeable land, 5–35% was impacted during Cyclone Gabrielle, and there were \$226–\$385 million dollars of direct farm impacts for the East Coast, Tararua, and Wairarapa. Farmers may be forced to reduce stock numbers or move their sheep to less affected areas, disrupting the flow of lambs to market.

Production costs – Dairy cattle

- On average, farm costs increased by around 13% between the 2021 / 22 and 2022 / 23 seasons, and around 33% over the past three years.
- However, the cost of dairy farm inputs in New Zealand increased by 0.8% in the second quarter of 2024 compared to the same period in 2023. This is a significant decrease from the 8.2% increase in the previous year.

	<ul style="list-style-type: none"> • The 2022 / 23 dairy season saw a combination of rising costs and falling revenue. DairyNZ estimates that dairy operating expenses in 2022 / 23 amounted to \$8.16 per kg milk solids (MS), up sharply from \$7.23 in 2021 / 22. • Fonterra’s payout to farmers for 2022 / 23 was estimated to be \$8.20, down from a record level of \$9.30 in 2021 / 22. This shift in the payout takes the average farm from a solid profit in 2021 / 22 to barely breaking even in 2022 / 23. • Approx. 39% of farms would pay more than \$2 per kg MS in interest, and 2024 / 25 operating expenses are forecast at \$6.44 per kg MS. This means that farms would need to generate \$8.44 per kg MS before being able to consider other non-operational expenses. • With non-operational expenses, the largest increase that has been seen is with regional rates increasing by 13%, and district council rates increased by more than 10%. • Feed costs remain one of the largest components. In the 2023 / 24 seasons, feed costs rose due to drought and weather events here in New Zealand. Added to this was a higher global grain price due to weather events and supply chain disruptions. 			
<p>(b)</p>	<p><i>How has the selected market force impacted the demand for your chosen product?</i></p> <p>Consumer preferences – Avocados</p> <p>Consumer preferences for New Zealand avocados in international markets are influenced by several factors, including quality, sustainability, and seasonality.</p> <p>Quality attributes:</p> <ul style="list-style-type: none"> • Taste and texture – developed markets like Australia, Japan, the United Kingdom, and the United States, often seek avocados with a smooth, buttery texture, and New Zealand avocados typically meet this preference. • Size and appearance – avocados that are uniform in size, free from blemishes, and perfectly ripened, are more likely to be preferred in international markets. This visual appeal is important for retail consumers in markets like Asia and North America. • Agricultural standards – these include rigorous pest control, quality checks, and certifications, ensuring that exported avocados are fresh and meet international food safety standards. <p>Seasonality (timing):</p> <ul style="list-style-type: none"> • One of the major advantages of New Zealand’s avocado export industry is its timing. New Zealand’s avocado harvest season runs from September to March, which is the opposite to that of many other major avocado-producing countries (e.g., Mexico, Peru, and Chile). This allows New Zealand to supply avocados to markets when other countries are not producing them, filling a gap in global supply. 	<p>General response, lacking specific supporting evidence or data.</p>	<p>Uses relevant data to support evidence.</p>	

Health and sustainability:

- Avocados are increasingly recognised as a superfood in markets around the world due to their health benefits, such as being rich in healthy fats, fibre, and various vitamins and minerals. This health-conscious trend aligns well with New Zealand's reputation for producing clean, green, and healthy foods, boosting the appeal of its avocados.

Price – Apples

- If the price of New Zealand apples increases, demand will generally decrease unless the apples are seen as particularly high quality or there are few substitutes available.
- If New Zealand apples become more expensive, consumers might substitute them with apples from other regions or different types of fruit altogether, e.g. local apples, pears, or bananas, leading to a reduction in demand for New Zealand apples.
- High quality, e.g. Rockit apples (US market), often come in premium packaging, are smaller and are marketed as a luxury snack, which can increase their price per kg. For example, prices typically range between \$3 to \$5 USD per pound, whereas regular apples (such as Gala or Fuji) in many markets tend to be much cheaper, typically priced between \$1 to \$2 per pound.
- If New Zealand apples are seen as higher quality or have strong brand recognition, demand may be less sensitive to price changes. In such cases, even with a price hike, loyal customers may continue purchasing them. However, if consumers do not see a significant difference between New Zealand apples and other types of apples, they may be more likely to switch to alternatives if prices rise.

Promotion – Deer velvet

- New partnerships with China are set to generate \$NZD 340 million in export revenue over the next three years. For example, the New Zealand Deer Industry Association signed a memorandum of understanding (MOU) with Beijing Tong Ren Tang to develop and promote New Zealand venison and deer velvet products.
- Last decade, the velvet industry was solely reliant on the traditional medicine market, and most of that was going into South Korea. However, a new strategy has come out to focus on developing a consumer-friendly market. About 60% of New Zealand's velvet is consumed in South Korea, but the new Chinese market would grow quickly once these new velvet uses were promoted.
- After visiting New Zealand in 2017, Kwangdong, a Korean pharmaceutical health food company, selected New Zealand velvet, which met its stringent grading and quality specifications for health functional food (HFF) products. The first two HFF claims, with extracts using New Zealand velvet, have now been approved by Korea's food safety authorities, aimed at improving prostate function and combatting fatigue. This will increase demand for velvet in New Zealand's top market.

	<ul style="list-style-type: none"> • VelTrak is a fully electronic, web-based system that enables New Zealand velvet to be tracked and traced each step of the way from the farm to the market. This allows proof of integrity from farm to market. With the VelTrak tag, consumers know it comes from a quality assured New Zealand farm and meets our stringent animal welfare and food safety standards. Because other producing countries do not offer this, it is expected to strengthen the premium position New Zealand velvet has in South Korea. • New Zealand velvet has gained a reputation as a premium ingredient in contemporary and sophisticated health food products in South Korea. In China, prestigious companies are recognising the value New Zealand velvet might play in their respective products. • The New Zealand velvet industry has grown significantly. For the year ending September 2009, farmgate returns for velvet were estimated to be \$26m, whereas for the year ending September 2019, farmgate returns reached \$106m. • The reputation of New Zealand velvet is based on: <ul style="list-style-type: none"> - its consistent quality and safety as a health food ingredient - compliance with New Zealand food safety protocols - New Zealand's relatively clean environment, compared with other parts of the world - free-range farming systems, and - strict animal welfare controls. 			
<p>(c)</p>	<p><i>Discuss the significance and impact of New Zealand trade agreements on the supply of, and demand for, your chosen primary product.</i></p> <p>Lamb</p> <p>Several trade agreements have helped Beef + Lamb New Zealand to boost its access to international markets for lamb. These agreements aim to reduce trade barriers, such as tariffs and quotas, and open new opportunities for New Zealand lamb producers. For example:</p> <ul style="list-style-type: none"> • The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) (2018), tariffs on lamb exports to countries like Japan have been gradually reduced, leading to better market access and competitive pricing for New Zealand lamb. • China (2008) is one of the largest importers of lamb, with the reduction of tariffs for lamb into China and increased competitiveness in the market. • EU (2023) sees an increase of quota, and a reduction in tariffs that will be beneficial, as there is a strong demand from the EU for high-quality meat. 	<p>General response, lacking specific supporting evidence or data.</p> <p>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.</p>	<p>Primary product is supported with recent data.</p> <p>Specific response with supporting data.</p>	<p>Comprehensive answer, well-reasoned with supporting data included.</p>

<ul style="list-style-type: none"> • UK (2022) provides New Zealand lamb with a preferential tariff access to the UK market. Having increased quotas and reduced tariffs will make New Zealand lamb more competitive in the UK market. The New Zealand–United Kingdom Free Trade Agreement (NZ-UK FTA) will provide New Zealand with a transitional duty-free quota for sheep meat of 35,000 metric tonnes per year in years 1–4, rising to 50,000 metric tonnes per year in years 5–15 (in addition to existing quotas). • There is no formal FTA between the US and New Zealand. Efforts to reduce tariffs on New Zealand lamb exports to the US have been ongoing, as the US market is significant for lamb exports, especially for high-quality cuts, i.e. French rack. • New Zealand is in negotiation with India. With a large, growing population, India is a valued potential market. However, India’s meat markets are protected from global trade with a preference for domestic products (chicken and goat). Currently high tariffs and trade restrictions make it difficult for New Zealand to compete with the domestic product. However, India’s growing middle class and increasing urbanisation are creating new opportunities for premium products, including high-quality imported meats, like lamb. As disposable incomes rise, there may be a greater willingness to try premium products like New Zealand lamb, especially in metropolitan areas. 			
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N1	N2	A3	A4	M5	M6	E7	E8
Partially explains ONE market force.	Partially explains TWO market forces.	Explains the supply of OR demand for TWO market forces in general terms (one market force weak.)	Explains TWO market forces in general terms.	Explains in detail ONE market force (using recent data and / or other evidence) <i>AND</i> Explains ONE market force in general terms.	Explains in detail TWO market forces (using recent data).	Explains in detail TWO market forces (using recent data) <i>AND</i> A trade agreement is fully explained, and either supply OR demand is discussed comprehensively, with the other partially discussed.	Explains in detail TWO market forces (using recent data) <i>AND</i> A trade agreement is fully explained, and supply AND demand are discussed comprehensively.

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