

Assessment Schedule – 2024**Agricultural and Horticultural Science: Demonstrate understanding of how the production process meets market requirements for a New Zealand primary product(s) (91531)****Assessment Criteria**

Achievement	Achievement with Merit	Achievement with Excellence
<i>Demonstrates understanding</i> involves explaining how the production process meets specific market requirements for a New Zealand primary product(s).	<i>Demonstrates in-depth understanding</i> involves explaining, in detail, how the production process meets specific market requirements for a New Zealand primary product(s).	<i>Demonstrates comprehensive understanding</i> involves using detailed explanations to justify how the production process meets specific market requirements for a New Zealand primary product(s).

Evidence

TASK	Sample evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)(i)	<p><i>Explain why market (1) has this [identified] market requirement.</i></p> <p>Possible answers could include:</p> <p><i>Timing requirements</i></p> <ul style="list-style-type: none"> • The returns for the chilled lamb market in the UK are high pre-Christmas, due to lower domestic supply, with premiums being paid to producers who can supply during this time. Roast lamb legs are popular for family meals at Christmas – lamb legs of 2.5kg are ideal. • New Zealand apples are in high demand in Asia when their domestic producers cannot produce fruit. This gives us a window of supply. New Zealand fruit is in demand from week 7 of the year through to week 35, when their domestic supply kicks in. Early in this window is especially profitable for New Zealand producers, as other Southern Hemisphere producers are not in the market. • Mandarins are required for Golden Week in Japan (end of April), and premiums are paid for growers who can supply during this week. 	<p>Explains why a market has a particular requirement.</p> <p>ONE market requirement must be used from the list provided.</p> <p>Part (a)(i) contributes for the Achievement and Merit criteria, but a candidate cannot get Achievement or Merit from part (a)(i) alone.</p>	<p>Explains in detail why a market has a particular requirement, supported with data.</p>	

(ii)	<p>A different market requirement must be used from the list provided.</p> <p><i>Explain why market (2) has this [identified] market requirement.</i></p> <p>Possible answers could include:</p> <p><i>Quality / attribute requirements</i></p> <ul style="list-style-type: none"> • Apples destined for the European market are to have less than 1cm² of blemish on their skin to be able to be sold as class 1 fruit. This is due to their being sold as high-quality premium fruit. • Deer velvet going to the Chinese market needs to have symmetrical tines and large, rounded tips. The Chinese market is after the tip, as this is the part of the velvet that is actively growing (up to 2cm a day) and has large amounts of organic molecules (proteins and fats) and minerals that are seen in traditional medicine to have health benefits. • Strong wool used for carpets needs to be sound and not break easily for it to make a quality carpet. The staple strength would need to be greater than 30Nkt, preferably higher. This way, the strands of wool will not break easily. • Merino wool used for clothing like Icebreaker needs to be around 20 microns. This is to ensure the fibre is not prickly when worn next to the skin. The finer the micron, the further reduction of the 'wool itch'. • Apples need to be a count size of between 70 and 90 to return high prices in the Asian markets. The count size is the number of apples that can fit into an 18.6 kg box. • Satsuma mandarins going to the Japanese market need to be in the size range of 55 to 63 mm. <p>OR</p> <p><i>Quantity requirements</i></p> <ul style="list-style-type: none"> • 700 tonnes of mandarins are supplied into the Japanese market, with much of this demand being attributed to festivities associated with Golden Week. 	Explains why a market has a particular requirement.	Explains in detail why a market has a particular requirement, supported with data.	
(b)(i)	<p>To meet the chosen requirement of market (1), explain why ONE management practice is carried out.</p> <p>Possible answers could include:</p> <p><i>High-quality feed – timing</i></p> <ul style="list-style-type: none"> • Having lambs on high-quality crops, with high energy values, will result in faster weight gain in lambs. Lambs put on an average of 150g per day 'live weight' on average pasture but are able to put on in excess of 400g per day live weight on crops such as chicory. Higher weight gains per day will result in the lamb reaching slaughter size earlier, allowing them to make the chilled Christmas market, where higher prices provide increased returns to suppliers. 	Explains how management practices allow the producer to meet a market requirement.	Explains in detail how management practices allow the producer to meet the market requirement, supported with data.	

(ii)	<p><i>Fruit thinning – quality</i></p> <ul style="list-style-type: none"> • Growers of apples commonly thin their fruit trees, to reduce the number of fruit on the tree. They do this by spraying sulphur or hormones during and just after flowering, to force the tree to drop flowers and fruitlets. By reducing the number of apples on the tree, growers ensure that less fruit comes into contact with each other in bunches. It is these collisions that cause blemishes on fruit that can downgrade the fruit or make them unsellable. <p>To meet the chosen requirement of market (2), explain why ONE management practice is carried out.</p> <p>Possible answers could include:</p> <p><i>Breed selection – attribute</i></p> <ul style="list-style-type: none"> • Farmers must choose the correct breed of sheep to allow them to produce the micron size the market requires. Base layer clothing typically requires the micron count to be 20 microns or less to make it softer against the skin and less irritable. Merino sheep produce wool with a micron count from 12 microns upwards, therefore allowing the farmer to meet the requirements of the market by choosing this breed. 	Explains how management practices allow the producer to meet the second market requirement.	Explains in detail how management practices allow the producer to meet the second market requirement, supported with data.	
(c)	<p>Discuss why the [chosen] management practice has the most significant impact on meeting the market requirements of the product, and therefore the price received by the producer.</p> <p>Possible answers could include:</p> <p><i>Justification – breed selection</i></p> <ul style="list-style-type: none"> • The choice of breed allows the producer to meet all aspects of the market requirements. They are able to alter the quantity, quality, timing, and attributes of the lamb meat. The more market requirements producers are able to meet, the more consumers are willing to pay. • Buying genetics to allow the producer to meet these market requirements benefits the producer not just this year but into the future, as you do not lose genetics. • Buying in rams allows many lambs to be produced due to mating ratios. • While flushing is useful, it is not reliable, as it is dependent on feed availability and the condition of the ewe prior to flushing. Flushing should be done in conjunction with good genetics, not replace it. • Flushing can have an effect on the quantity of lamb being produced on farm, but it doesn't have any effect on the timing or quality of the lamb being produced, therefore is less significant than breed selection at meeting the market requirements. 	Gives details but may not come to a substantial or completely accurate.	Explains in detail, using some data as evidence.	Justifies one practice over another for either market.

N1	N2	A3	A4	M5	M6	E7	E8
Partially explains how ONE relevant management practice allows the producer to meet a market requirement for ONE market.	Partially explains how TWO relevant management practices allow the producer to meet a market requirement for TWO markets.	Explains how ONE relevant management practice allows the producer to meet a market requirement for ONE market AND Partially explains how a second management practice allows the producer to meet a market requirement for the second market.	Explains how TWO management practices allow the producer to meet a market requirement for BOTH markets.	Explains in detail (use of data) how ONE relevant management practice allows the producer to meet a market requirement for ONE market. AND Explains how a second relevant management practice allows the producer to meet a market requirement for the second market.	Explains in detail (use of data) how TWO management practices allow the producer to meet the market requirements for BOTH markets.	Explains in detail (use of data) how TWO management practices allow the producer to meet the market requirements for BOTH markets AND Partial justification of the management practice (for either market) that has the most significant impact in meeting the market requirements and price received.	Explains in detail (use of data) how TWO management practices allow the producer to meet the market requirements for BOTH markets AND Full and comprehensive justification of the management practice (for either market) that has the most significant impact in meeting the market requirements and price received.

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