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91531



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Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## Level 3 Agricultural and Horticultural Science 2023

### 91531 Demonstrate understanding of how the production process meets market requirements for a New Zealand primary product(s)

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how the production process meets market requirements for a New Zealand primary product(s).	Demonstrate in-depth understanding of how the production process meets market requirements for a New Zealand primary product(s).	Demonstrate comprehensive understanding of how the production process meets market requirements for a New Zealand primary product(s).

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 of the task 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 2–11 in the correct order and that none of these pages is blank.

Do not write in any cross-hatched area (DO NOT WRITE). This area will be cut off when the booklet is marked.

**YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.**

Merit

TOTAL 06

## INSTRUCTIONS

Carefully read ALL the instructions and parts before answering.

You must answer the different parts using TWO different primary products – Primary product (1) and Primary product (2).

Different primary products are required for parts (a) and (b). Part (c) will be answered using either the primary product used in part (a) or part (b).

In addition, you must use different market requirements from the list below for parts (a) and (b).

### Market requirements

- Quality (consistency, attributes, uniformity, presentation)
- Quantity
- Timing
- Price

## STIMULUS MATERIAL

Primary producers need to have a clear understanding of the requirements their customers or overseas markets have. This will allow them to make informed decisions on the farm to be able to satisfy those requirements.

Primary producers may get feedback from customers directly, from their importers overseas, from government industry bodies, or from their primary producers' organisations.

The better the feedback and understanding between the market and the primary producers, the better the alignment between production and market.

**PLANNING**

**TASK: How management practices meet market requirements**

Name a primary product and a specific market. Choose a market requirement from the list on page 2.

Primary product (1): New Zealand King Salmon

Specific market: USA

Market requirement (1): Quality

- (a) (i) Explain a market requirement for your named primary product (1). Use data to support your answer.

The quality of a NZ King Salmon is a very important market requirement for the process of selling the Salmon it will determine how much ~~you get for it~~ <sup>money you</sup> get for it. For a Salmon to be good quality you want it to be 30 on the rock ~~Scale~~ <sup>Scale</sup> So the meat is a nice orangy colour. You also want it to be high in Omega 3's because ~~that's~~ <sup>good</sup> because those fatty acids are good for the nervous system. The pH level is important to have a good tasting Salmon you want a level of 6.15 pH any higher than that the Salmon will ~~not~~ taste a bit too tender.

- (ii) Explain two management practices that are carried out to meet the market requirement of your chosen primary product (1).

You must clearly link the management practices to the market requirement and use data to support your answer.

Management practice (1): Feeding

Feeding is a very important part to have a good quality salmon. They feed the salmon these pellets that have 18% protein in them 25% oil and also have nutrients the nutrients help keep the salmon healthy well the oil helps build the omega 3 fatty acids that <sup>grow</sup> make the fish big and strong. They feed the salmon ~~through~~ through a dispenser that shoots <sup>out</sup> out of the water and shoots the pellets <sup>out</sup> out like a <sup>spring</sup> ~~spring~~.

They have a camera at the bottom of the pond so if any food hits the bottom it turns off because the fish are full. <sup>Because you don't waste food it's expensive</sup>

Management practice (2): Housing (where the salmon live)

Where the salmon are kept and living is very important to the quality because it also the appearance on the salmon on the outside that matters.

You don't want the salmon to have any cuts or bruise because it will turn down the looks of and that will mean you won't get top dollar for it. So it means

the place they live has to be safe. nothing sharp anywhere that the salmon could cut them selves on and a strong net so no other animals can get in and hurt them in any way. This all helps to have a better quality salmon and that means a higher price they can get sold for.



Name a second primary product and specific market. Choose a **different** market requirement from the list on page 2.

Primary product (2): Lamb

Specific market: UK

Market requirement (2): Timing

- (b) (i) Explain a **different** market requirement for your named primary product (2). Use data to support your answer.

Timing <sup>comes</sup> ~~comes~~ down to when am I going to get the most money for my product. It's supply and demand. It works well between NZ and UK because there off season is our on season and its the there on season is our off season. So its good because when its there off season they still want lambs so we sell them ours in 2021/2022 we exported around 35,000 lambs. A time of year they have a high demand for them is christmas time because that time of year the farms will get the most amount of money for a lamb. So farmers work really hard to make sure their lambs are ready to be sold at that time.

- (ii) Explain two management practices that are carried out to meet the market requirement of your chosen primary product (2).

You must clearly link the management practices to the market requirement and use data to support your answer.

Management practice (1):

Mating Mating

You want to put the ram out with the ewes normally on St Patrick's day 25th March. This is important so they are lambled in time so they have a good amount of time to mature and grow to be ready to get sent over to UK for Christmas. A lamb is normally <sup>then</sup> ready to go at about 45 kgs <sup>that's when</sup> the farmer are happy to sell them at to get top dollar.

Management practice (2):

Flushing

Flushing is important before and after the lamb has been lambled. The ewe to eat the best pasture before lambing to get healthy so the lamb is healthy. After the lamb has come off milk good to put it on really good pasture to grow it strong and fast so it's at a good size and health to be exported over to UK at around 45 kg so farmer gets top dollar.

Answer this part using either primary product (1) or primary product (2).

Primary product: Salmon

- (c) Justify the management practice that is the most significant for maximising profit or maximising volumes for your chosen primary product. Use data to support your answer.

Feeding is a very important way of insuring Max profit because what you put into the Salmon is what you will get out of eg size of it the health of it the appearance of it and because all that's good you will get the Max profit you possibly can of it. To grow the Salmon they feed them pellets and in there are fatty oils that bring on Omega 3's that are fatty acids that grow the Salmon and are also good for the nervous system. The way they feed the Salmon having the camera sensor at the bottom of the pond so can tell when they are full and not waste food is saving a lot of money because you are feeding till the Salmon are satisfied and not wasting money on food that's not getting eaten. Because food is expensive.



There is also nutrients in the food to keep the Salmon healthy therefore can grow and be in the best quality as they can. Feeding is very important for the quality of your Salmon in the end and when you go to sell it to get Max profit. because what you put into the Salmon is what you'll get out of it in money terms.

## Merit

**Subject:** Agricultural and Horticultural Science

**Standard:** 91531

**Total score:** 06

Q	Grade score	Marker commentary
One	M6	The candidate used salmon and lamb as primary products, and UK markets, in their response about specific market requirements. They have provided some data to support the scientific explanation of using the management practice to meet the market requirement for salmon. For Part (c), the candidate has connected feeding as a management practice, and explained how it can lead to profits being maximised.