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91531



NEW ZEALAND QUALIFICATIONS AUTHORITY
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SUPERVISOR'S USE ONLY

Level 3 Agricultural and Horticultural Science, 2016

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

9.30 a.m. Monday 14 November 2016
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 2–8 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.

Achievement

TOTAL

A4

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INSTRUCTIONS

This paper consists of ONE task, in THREE parts.

Before you select your nationally significant primary product and its specific market, read the **entire task** carefully, to ensure that your selection will allow you to meet the requirements of the task.

Nationally significant primary product (in unprocessed form): Golden kiwifruit

Specific market for this product: Japan

Growers follow a sequence of production processes in order to produce a product that meets the requirements of different markets.

In the table below, list the key production processes that are carried out during the production cycle of your product. The production cycle includes the following three phases: establishment, growth, and harvesting of the product.

Production processes
e.g. Grafting new vines
e.g. Drenching for parasites
Pollination
Training
Irrigation
Pruning
Harvest

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For your product, describe the consistency or uniformity requirements that could influence the price received by a grower when supplying to the market, and explain why the market has these requirements.

the consistency and uniformity requirements that could influence the price received are that golden kiwifruit to be of a consistent size, be a consistent golden colour, juicy and plump which are all requirements for the Japanese consumers. The grower would need to ensure that he carries out all management practices correctly and consistently to ensure that the kiwifruit grown meet these requirements and are of the best quality to be able to supply to the Japanese market. //

**This examination continues
on the following page.**

PART B

In the table below, write THREE management practices that are carried out during the production of your product.

The selected management practices must be from at least TWO of the following different phases:

- Establishment of product
- Growth of product
- Harvesting of product

TWO examples have been provided to assist you.

Management practice		Phase of production
e.g.	Grafting new vines	Establishment
	Drenching for parasites	Growth
1	Pollination	Establishment
2	Training	Growth
3	Irrigation	Growth

Explain how your selected management practices impact directly on the quality and/or quantity of your product at harvest.

Management practice (1)

Pollination impacts on the quantity of kiwifruit ^{at harvest} and is an essential management practice carried out during the establishment phase. Pollination is essential as because if a flower is not pollinated it will not produce a kiwifruit. "Robobee" is a pollination device that is becoming used more frequently and is very effective as it sprays pollen directly onto the flowers, this ensures that a maximum amount of flowers are pollinated resulting in a larger quantity of kiwifruit produced. Pollination is a very important management practice that impacts directly on the quantity of kiwifruit at harvest. //

Management practice (2)

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Training is a management practice that impacts on the quality and quantity of kiwifruit at harvest. "Jupacane" is a ~~new~~ method of training the vines to grow in a tidy straight manner which enables stress free ~~pruning~~ pruning and reduced labour costs. Because the vines are trained to grow in a straight tidy manner, when its time for harvest the fruit are much more easily accessible and therefore a larger quantity is able to be harvested. Training also ensures the pruning is easier which enhances the growth of the fruit, enabling them to be of a higher quality at harvest.

Management practice (3)

Irrigation is a third management practice carried out during the growth stage which impacts directly on the quality of kiwifruit at harvest. Irrigation is carried out during the summer ~~Jan/Feb~~ Jan/Feb when there is a ~~short~~ rain shortage, and enables the vines to keep hydrated and growing healthily. Irrigation also enables the fruit to be juicy and plump which is of a high quality.

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Justify which management practice you consider would have the greatest impact on the overall price received and/or the quantity available for sale by the producer.

I think that pollination is the management practice which has the greatest impact on the price received and the quantity of kiwifruit available for sale by the producer. This is because it is one of the first management practices carried out and is entirely essential for fruit growth to develop. Without pollination no fruit would develop, ~~and~~ which is why pollination is so important and has such a great impact. Which is why growers are trying to find ways to help the pollination process to ensure maximum pollination on each plant, devices such as the "Robo bee" are used which pollinate the flowers directly. Therefore I believe that the management practice of pollination has the greatest impact on the overall price received and the quantity available for sale by the producer, as the more flowers that are pollinated, the more kiwifruit grow, therefore a larger quantity is available for sale resulting in a higher price received. //

Achievement exemplar for 91531 – 2016		Grade Score: A4
Question part	Annotation	
A	The response provided general information on consistency and uniformity requirements of kiwifruit for the Japanese market.	
B	The response provided three management practices carried out during kiwifruit production and how the management practices affect production, in general terms. No data or specific details were provided.	
C	No specific details or data were provided to justify the management practice which has the overall greatest impact on price received or overall quantity produced.	