

# 2023 NCEA Assessment Report

<b>Subject:</b>	Agricultural and Horticultural Science
<b>Level:</b>	Level 3
<b>Achievement standard(s):</b>	91530, 91531, 91532

## General commentary

Candidates who achieved well in the assessment had selected primary products that had current and relevant data. Often this information was collected from field trips or interviews with growers and producers. Candidates who did not do well mostly wrote pre-prepared answers.

Candidates who achieved merit or excellence grades presented their spontaneous but well supported responses in a coherent and well-structured manner.

## Report on individual achievement standard(s)

### **Achievement standard 91530: Demonstrate understanding of how market forces affect supply of and demand for New Zealand primary products**

#### Assessment

This was a one question paper with three parts. Candidates were expected to demonstrate understanding of how three chosen market forces affect the supply of and / or demand for the chosen product. In Part C the candidates were expected to give reasons for why one market force had a greater impact on supply and demand of their product than another market force.

#### Commentary

Candidates generally demonstrated a good understanding of market forces and came prepared with responses on a range of market forces for two primary products. Candidates who conducted more thorough research and chose primary products with readily available supporting evidence, generally attained higher grades.

#### Grade awarding

Candidates who were awarded **Achievement** commonly:

- answered all parts of the examination
- had a basic understanding of the effect their selected market forces had on the supply and demand of their primary product
- gave responses that lacked supporting detail or data.

Candidates who were awarded **Achievement with Merit** commonly:

- provided responses that had a detailed explanation of the market force and its effect on supply and demand
- provided relevant and useful supporting data or evidence in their response
- structured their response in an organised manner.

Candidates who were awarded **Achievement with Excellence** commonly:

- wrote responses in a structured manner
- presented data to support their justification of the most significant market force
- included comparison of the given market force with other market forces and gave supporting evidence in their answers.

Candidates who were awarded **Not Achieved** commonly:

- did not provide a response for all parts of the examination paper
- wrote answers without relevant details.

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

### Assessment

This was a one question paper with three parts. The candidates were required to demonstrate an understanding of the requirements of their chosen market of two different New Zealand primary products. For each product the candidate was then required to demonstrate understanding of the management practices that growers or producers use to produce products that meet the specific requirements of the markets.

In part C the candidates were required to demonstrate understanding of the most significant management practice for maximising the profit or the volume of product.

### Commentary

This assessment provided ample opportunities to candidates to choose a wide range of products for their responses. A detailed knowledge of the key market requirements for the two chosen primary products was fundamental to the candidate's success.

Field trips and interaction with farmers, growers and orchardists may provide candidates with data and perspectives to be able to achieve well in these assessments.

## Grade awarding

Candidates who were awarded **Achievement** commonly:

- demonstrated understanding of what market requirements are, and how they related to their products
- linked a management practice to a market requirement
- demonstrated understanding of essential management practices for their chosen products
- provided general information on the production process of their chosen products and described market requirements in general terms.

Candidates who were awarded **Achievement with Merit** commonly:

- used specific detail or data when explaining market requirements
- explained production using data or specific detail
- showed in-depth understanding of management practices selected.

Candidates who were awarded **Achievement with Excellence** commonly:

- wrote reasons for choosing management practices which have the largest overall impact on maximising profitability but meeting market requirements
- provided specific details and data that supported their justification
- produced answers that were logical and clearly expressed, using accurate data or specific detail.

Candidates who were awarded **Not Achieved** commonly:

- provided very little or no information about the market requirements for their chosen products
- used only one product
- used the same market requirement for both products
- did not link management practices with market requirements
- provided a partial explanation of the effect a management practice has on meeting the market requirements for their chosen product.

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## **Achievement standard 91532: Analyse a New Zealand primary production environmental issue**

### Assessment

The assessment consisted of one question, split into three parts. Candidates were able to choose their own primary production system that best allowed them to analyse the environmental issue of greenhouse gas emissions.

Candidates were required to explain how greenhouse gasses were emitted from their chosen primary production system. They were then asked to identify steps that the New Zealand government or industry were taking to help reduce the emission of greenhouse gasses. Lastly, the candidates were asked to identify courses of action that producers could take to reduce their greenhouse gas emissions.

## Commentary

Most candidates used dairy farming as their primary production with a smaller number using sheep and / or beef.

Candidates who included details on how greenhouse gases are emitted from their chosen primary production system and used accurate details on current policy around GHG emission in primary production achieved well. Many candidates used inaccurate details around government policy, e.g. Dairy farming being included in the emission trading scheme, or greenhouse gas emissions taxes were already in place for dairy farming.

Candidates should be made aware that courses of action needed to be ones that reduced the emission of greenhouse gasses, e.g. using methane inhibitors rather than ones that offset emissions, e.g. planting trees.

## Grade awarding

Candidates who were awarded **Achievement** commonly:

- described how greenhouse gases were emitted from their primary production system
- showed a lack of understanding of government initiatives and policy around greenhouse gas emissions
- identified courses of action that reduce the emission of greenhouse gases
- gave descriptions that lacked some supporting details or explanations.

Candidates who were awarded **Achievement with Merit** commonly:

- explained how greenhouse gases were emitted from their primary production system using accurate details and supporting data
- explained government or industry initiatives that help reduce emissions
- referred to the Paris agreement and He Waka Eke Noa
- explained a realistic course of action and how this would reduce the emissions of greenhouse gases without giving full details or a logical comparison about why it was the best option.

Candidates who were awarded **Achievement with Excellence** commonly:

- explained how greenhouse gases are emitted using accurate details and supporting data
- explained government or industry initiatives using accurate details and supporting data
- discussed two courses of action in detail and gave a logical argument for the best course of action to take to improve the environmental, social, political and economic sustainability of production.

Candidates who were awarded **Not Achieved** commonly:

- did not describe how greenhouse gases were emitted from their production system
- focused their response on the impacts of climate change rather than on farm emissions
- chose a course of action that was not relevant to the reduction of greenhouse gases.