

Scholarship

2009 Assessment Report

Agricultural and Horticultural Science

INTRODUCTION

The Scholarship examination for Agricultural and Horticultural Science was introduced in 2009. Twenty five candidates sat the examination, and four Scholarships were awarded with a cut score of 13 marks.

COMMENTARY

The examination required the candidates to discuss issues in relation to primary production systems. The examiner expected responses that discussed the issues by drawing on appropriate systems that had been studied. Many of the responses were ‘system centric’, i.e. many candidates discussed the system(s) well, but the issues not well, or the relevance of the issue to the chosen system was tenuous. This was disappointing as the focus of the examination – studies of primary production systems for sustainable production in relation to contemporary issues – had been clearly signalled in both the Performance Standard and the Assessment Specifications.

Specific comments on each of the three questions follow.

Question ONE – ‘Discuss either traceability or climate change...’

1. The two readings were intended to give additional guidance to candidates in this inaugural examination. Two potential issues have been identified. Firstly, the readings may have been too long. Secondly, many candidates quoted parts of those readings in their answer. This could be interpreted as candidates believing that the examiner expected those quotes to be discussed (although there was no explicit instruction to do so), or that having failed to read other learning resources on those issues, that candidates had no resources to cite other than the two readings.
2. Most candidates did not show critical analysis, perceptive thinking or evidence of reading on the topic, or wider general knowledge.

Question Two – ‘Analyse how the production system is affected by three issues...’

1. Like the readings in Question One, the figure in Question Two was included to give additional guidance in this inaugural examination.
2. Despite listing the four components (physical, technical, economic and social), few candidates used that information to structure their answer, with most writing on only one or two of those components.
3. Most candidates wrote well on two issues although the third was often a rather tenuous example. Few candidates were able to discuss how this might impact on the production system in the future.
4. Only five candidates discussed how the farmer/grower might respond to the selected issues and of those, four were awarded Scholarship. This was due to the overall quality of their answer to this question and not due to the weighting of the marks on that second part of the question.

Question Three – ‘Discuss sustainability...’

1. Most candidates confined their discussion of sustainability to environmental considerations, and did not cover economic sustainability (businesses being able to continue profitable trading) or social sustainability (business activity creates employment for owners and employees) as highlighted in Explanatory Note 2 in the Performance Standard.

2. The question required a matrix of 9 sub-topics – 1 system × 3 considerations × 3 stakeholder responses. Most candidates wrote on a limited set of those topics – typically only 1 system × 1 consideration (environmental) × 1 stakeholder response (producer).
3. Only two candidates showed understanding of ‘balance of considerations’ – that there are trade-offs between the considerations. (For example, a dairy producer might maximise economic gains at the expense of the environment, or consumers may demand pork that is not reared in stalls but not be prepared to pay the higher costs of ‘free-range’ production methods.)
4. Few candidates discussed producer and industry and government responses – most discussion was on producer responses. This part of the question would have allowed a Scholarship level candidate to give examples of how those three stakeholders might have the same or different responses to a particular issue.

SCHOLARSHIP WITH OUTSTANDING PERFORMANCE

There were no candidates who were awarded Scholarship with Outstanding Performance.

SCHOLARSHIP

Candidates who were awarded Scholarship but not Scholarship with Outstanding Performance commonly:

- answered the questions accurately, especially in the multi-part Question Three
- communicated in a logical concise manner
- provided evidence of in-depth reading of relevant learning resources
- quoted data and references in support of their answer
- demonstrated some ability to ‘evaluate’ and ‘critically analyse’
- provided evidence of understanding of a broader range of systems, issues and considerations.

OTHER CANDIDATES

Candidates who were not awarded Scholarship or Scholarship with Outstanding Performance commonly:

- failed to respond accurately to what the question was asking for, especially for the multiple part questions
- selected ‘minor’ primary production systems that gave reduced scope for a comprehensive answer
- concentrated on environmental aspects of sustainability and producer responses, with limited or no mention of economic and social sustainability
- provided generic responses – did not illustrate the answer with specific data or references
- did not demonstrate in-depth knowledge or understanding of at least two primary production systems
- lacked structure in the presentation of their written responses
- gave a response discussing what the issues involve, and why they are issues, but did not show understanding and perception of the future implications or a range of stakeholder responses.

Recommendations for 2010, arising from Scholarship 2009 Assessment Process: Agricultural and Horticultural Science

The Assessment Specification statement ‘...questions will require the candidate to answer in relation to at least one primary production system of their choice’ is intended to allow the question(s) to be answered with reference to a wide range of systems. Therefore, candidates should be encouraged to prepare by reading reference material on primary production systems that best illustrate the types of issues that are listed in the Assessment Specifications. Contrast this with the Level 3 Agricultural and Horticultural Science Explanatory Notes, where the choice of system is defined as those that ‘earn significant export earnings ... or allow for self-sufficiency ... or employ a significant workforce’. Primary products such as blueberries, kumara and sandersonia may be appropriate selections for those Level 3 standards, but are less suitable for the Scholarship examination. Scholarship candidates who select the major export products and systems such as apples, dairy, kiwifruit, meat or grapes would have access to better learning resources, especially those with a contemporary issues and sustainability focus, than those candidates who choose minor products and systems.

Candidates must understand the difference between products and systems. For example, the dairy (cow) system involves at the farm level the production of animals and milk, and at the processing level, cheese, milk powder and related products. A kiwifruit orchard produces kiwifruit but the kiwifruit system may involve other products if the fruit is processed. Venison and velvet are two products from one system.

The relevant learning resources are widely dispersed and in 2010, a key reference list for the contemporary issues listed in the Assessment Specifications will be published on an appropriate web site.

Note that biosecurity issues will affect the future sustainability of production systems (economics) and export markets (consumer demand, food quality). All three stakeholders might share a common view to ensure that new biosecurity threats do not enter or establish in New Zealand. For traceability in meat production, the initiative is being driven by Government and the meat exporting companies in response to consumer and retailer demands, but industry and farmer groups are strongly antagonistic, focusing on compliance costs and giving less weight to market access considerations.

In 2009, only four of the twenty-five candidates did not attempt or answer all questions, and there was no clear evidence that the examination was too long. However, it is accepted that the structure of some questions and the inclusion of two readings would have taken some time to comprehend, and the examiner has resolved to simplify the question and examination format for 2010.

Candidates would have more scope to develop a high quality answer if sustainability issues and perspectives were chosen first then illustrated using the most appropriate production system.

In summary, three key ‘take-home messages’ arising from the 2009 examination are that Scholarship 2010 candidates should:

1. Choose primary production systems that give greater scope for discussing aspects of sustainability and a range of contemporary issues.
2. Read a wide range of learning resources on the topics listed in the Assessment Specifications.

3. Read the examination questions carefully and write a well-structured answer that addresses each part of each question.