

Assessment Report

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Part A: Commentary

Candidates should read the entire question to ensure that they understand what the question requires them to do before selecting their management practices. The management practices / land use / livestock species need to be carefully selected so that they are relevant to that question and there is sufficient depth for the candidate to discuss, allowing them to reach merit and excellence levels.

Overall, the biggest limiting factor appeared to be that students began writing without taking time to understand what the question was asking. Students can improve their examination performance by linking management practices with the scientific, social, economic, and environmental factors to explain why these management practices are carried out. For example, drainage helps to reduce water in the pore spaces, which in turn increases oxygen levels in the soil for root respiration.



Part B: Report on standards

91290: Demonstrate understanding of techniques used to modify physical factors of the environment for NZ plant production

Examinations

The examination consisted of three questions. Candidates were required to respond to all three. The first question required the candidate to apply their understanding of management practices used to modify airflow in plant production systems.

The second question required the candidate to apply their understanding of management practices used to modify excess water in plant production systems.

The third question required the candidate to apply their understanding of management practices used in glasshouses for plant production systems.

Observations

Candidates need a greater understanding on how plant processes directly link to quality and quantity and how these all influence economics. Students must understand the difference between the physical environment and environmental sustainability. A question about how the practice impacts on the environment could be answered by discussing how it impacts on the physical environment and therefore how this impact on the yield.

For example: Drainage helps to reduce water in the pore spaces, which in turn increases oxygen levels in the soil for root respiration. Reduction of water also means that the process of transpiration can continue as the roots of the plants are not damaged. Microorganism activity increases which helps with further drainage and the release of nutrients. Temperature of the soil is improved which means that enzyme activity increases in the plant allowing for improved plant processes. All these environmental aspects will help the plant to produce more glucose through photosynthesis which means that the produce is improved in quality and quantity and timing is improved as produce is ready at an earlier time, all link to improved economics for the farmer.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- described their chosen management practice or practices that was relevant to airflow in a production system, or managing excess water, or when modifying a growing environment for plants.

Candidates whose work was assessed as **Not Achieved** commonly:

- gave information that did not relate to their chosen management practices.
- responses clearly indicated that candidates simply gave information that they recalled without seeing its relevance to the question being asked.

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

- explained how the management practice impacted on plant production with reference at times to quality and quantity, and plant processes.

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

- analysed the chosen management practices and justified how the practice impacted on yield, timing, quality and quantity.
- justified how the management practice impacted on the grower's economics, environment, and social factors.

91294: Demonstrate understanding of how NZ commercial management practices influence livestock growth and development

Examinations

The examination consisted of three questions. The first question required the candidate to apply their understanding of management practices relating to the provision of shelter.

The second question required the candidate to apply their understanding of management practices relating to the provision of feed for young livestock, and how this differs from adult livestock.

The third question required the candidate to apply their understanding of the effect of nutrient or mineral deficiencies.

Observations

Candidates who had good foundational knowledge of a range of species and did not try to use prepared answers did well. Choosing an appropriate livestock species for each particular question was essential to ensure candidates could fully answer the questions and provide the depth needed to reach a Merit or Excellence grade. For example, when discussing shelter and selecting livestock species such as chickens or pigs where shelter is essential for commercial production. Candidates who chose to use the given context as their selected livestock, often did not seem to have sufficient knowledge of that livestock. It is encouraged that learners use their own livestock that they are familiar with. This will help them engage better with the questions and have the depth of understanding needed to reach merit or excellence levels.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- described their chosen management practice or practices
- described their chosen management practice or practices that were relevant to providing shelter for their selected livestock, or how type of feed affects growth, or how nutrient deficiency affects growth for livestock.

Candidates whose work was assessed as **Not Achieved** commonly:

- gave information that did not relate to their selected management practices
- gave responses that simply gave information that they recalled without seeing its relevance to the question being asked.

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

- explained why management practices were carried out but unable to discuss the economic, timing or quantity/quality implications.

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

- analysed animal management practices and provide evidence to justify how the practice impacted on yield, timing, quality and quantity
 - were able to justify how the management practice impacted on the farm's economics, environment, and social factors.
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91297: Demonstrate understanding of land use for primary production in New Zealand

Examinations

The examination consisted of three questions of which candidates were required to respond to all three. The first question required the candidate to apply their understanding of forestry and pasture, and land use. The second question required the candidate to apply their understanding to barriers to the change in land use. The third question required the candidate to apply their understanding of land use in terms of a farmer's social licence to farm.

Observations

Students listed factors influencing land use but did not explain why/how this made it more suitable i.e. by linking rainfall to photosynthesis. Provided answers which did not contain evidence that matched the questions There was a poor understanding of key terms such as barriers, retain, low/high intensity, social license. Learners needed to discuss their chosen option by justifying their decision, rather than explaining what each option is. Candidates who did well in Question 1 were able to understand that forestry provided no returns for 25-30 years and the impact this would have on yearly income for farmers.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- explained how environmental factors make specific regions suitable for pasture and for forestry
- could explain two factors which acted as barriers to more intensive land use
- were able to explain how a farmer's social license has been threatened.

Candidates whose work was assessed as **Not Achieved** commonly:

- did not explain factors that made specific regions suitable for particular land use
- did not identify or explain factors that acted as barriers to more intensive land use.

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

- explained using detail (such as linking to pasture growth) how environmental factors make specific regions suitable for pasture and for forestry
- explained how barriers to more intensive land use can be overcome
- were able to explain how a farmer's social license has been threatened for two different land use types by making detailed links to societal pressures.

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

- were able to discuss why a farmer would either stay in pasture or convert to forestry in terms of economic and workforce factors
- justified a farmer's decision in changing from a low-intensity land use to a more intensified land use in terms of two factors chosen from a choice of three: economic, environmental or technological
- were also able to justify, using two factors (technological, social, political), how a farmer can produce their primary product in a way that meets the social license to farm.

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Previous years' reports

[2020 \(PDF, 160KB\)](#)

[2019 \(PDF, 221KB\)](#)

[2018 \(PDF, 96KB\)](#)

[2017 \(PDF, 45KB\)](#)

[2016 \(PDF, 219KB\)](#)
