

2015 NCEA Assessment Report

Agricultural and Horticultural Science Level 2 91290, 91294, 91297

Part A: Commentary

Comment on the overall response of candidates to 2015 examinations for all achievement standards covered by this report.

The examination papers were of an excellent quality. They were very well structured and the questions provided sufficient opportunities for the candidates to attain achievement.

They were of standard layout which is what the candidates would be expecting. Instructions to candidates were clearly and easy to understand. Questions were well structured and concisely written in language that candidates understood. Each question had an extensive evidence list of statements to obtain an achieve, merit and excellent grade. Each grading scaffolds onto the next level and this was helpful. The bullet points and scaffolds provided candidates with good direction and enabled the candidates to structure their answers well without giving them too much guidance.

Part B: Report on standards

1. Assessment Report for 91290: Demonstrate understanding of techniques used to modify physical factors of the environment for New Zealand plant production

Achieved	Candidates who were assessed as Achieved commonly: <ul style="list-style-type: none"> described how the use of drains modified two physical factors of the soil showed how misting or frost pots modified two physical factors in commercial fruit production understood how controlling two physical factors of the germination environment improved production.
Not Achieved	Candidates who were assessed as Not Achieved commonly: <ul style="list-style-type: none"> partially or insufficiently described how the use of drains modified two physical factors of the soil partially or insufficiently showed how misting or frost pots modified two physical factors in commercial fruit production partially or insufficiently understood how controlling two physical factors of the germination environment misunderstood the meaning of key words, such as physical factors and environmental impacts showed a narrow understanding of the standard gave only one physical factor when two was required did not show any understanding of the physical factors associated with drains, misting, frost pots or germination rewrote the question in the answer without supplying any further information.
Achieved with Merit	Candidates who were assessed as Achieved with Merit commonly: <ul style="list-style-type: none"> linked the physical factor in the question with how it affected plant production explained how the use of drains led to an increase in pasture or crop yield demonstrated an understanding of how misting or frost pots modified two physical factors and improved the yield of fruit in commercial fruit production provided an explanation how the control of two physical factors of the germination environment could lead to a more uniform size at harvest.
Achieved with Excellence	Candidates who were assessed as Achieved with Excellence commonly: <ul style="list-style-type: none"> read and understood what the excellence question required were able to give well thought out answers demonstrating thinking when comparing the preferred technique over another technique based on environmental, social and / or economic impacts justified the preferred technique by comparing alternative techniques which could be used fully explained all reasons, with comprehensive and integrated supporting evidence

	<ul style="list-style-type: none"> evaluated the decision to use mole drains over open drains to modify the physical factors of the soil for improved yield in crop or pasture production. Compared and contrasted misting and frost pots to improve the fruit yield in commercial kiwifruit production, considering the economic and social impacts of each technique justified the use of lighting techniques to treat seeds during germination, over untreated seeds, to increase the quality of plant production, with consideration of economic and environmental impacts.
Standard specific comments	<p>Candidates need to ensure that they use the terminology associated with the standard and that they use it in the correct manner. Terms like wilted, soil air ratio, photosynthesis, glucose, carbohydrates, transpiration need to be used and explained. Colloquialisms should not be used, such as plants drowning, plant needs to breathe, feeding plants water, and plants are thirsty.</p>

2. Assessment Report for 91294: Demonstrate understanding of how New Zealand commercial management practices influence livestock growth and development

Achieved	<p>Candidates who were assessed as Achieved commonly:</p> <ul style="list-style-type: none"> attempted all answers understood commercial calf rearing practices and how they affect livestock growth and development understood how drenching or clean / safe pastures practices were carried out understood why farmers use supplementary feeding systems.
Not Achieved	<p>Candidates who were assessed as Not Achieved commonly:</p> <ul style="list-style-type: none"> did not answer all the questions had limited knowledge of calf rearing practices did not know why farmers used supplementary feeding did not link the management practice to growth rate.
Achieved with Merit	<p>Candidates who were assessed as Achieved with Merit commonly:</p> <ul style="list-style-type: none"> wrote extended answers to demonstrate knowledge showed in-depth understanding of calf rearing showed in-depth understanding of internal parasite management showed in-depth understanding of supplementary feeding linked improved feed utilisation with improved growth rates wrote extended answers to demonstrate knowledge.
Achieved with Excellence	<p>Candidates who were assessed as Achieved with Excellence commonly:</p> <ul style="list-style-type: none"> showed comprehensive understanding of calf rearing practices and accurately explained the impacts on quantity and economics of production showed comprehensive understanding of internal parasite management and how this can improve the quantity and quality of livestock produced showed comprehensive understanding of how supplementary feeding can be used to improve quality and quantity of livestock gave justification in terms of economic return to the farmer.

3. Assessment Report for 91297: Demonstrate understanding of land use for primary production in New Zealand

Achieved	<p>Candidates who were assessed as Achieved commonly:</p> <ul style="list-style-type: none"> were able to explain environmental and economic reasons why swamp land was historically being converted for use in primary production provided ideas as to how technological and social factors are affecting the relationship between urban dwellers and primary industry were able to explain some economic reasons why farmers are converting from one form of primary industry to another.
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<p>Not Achieved</p>	<p>Candidates who were assessed as Not Achieved commonly:</p> <ul style="list-style-type: none"> • did not read the questions carefully and wrote answers that did not address the question • did not provide enough information in their answers • did not understand the words – environmental, economic, or social conditions.
<p>Achieved with Merit</p>	<p>Candidates who were assessed as Achieved with Merit commonly:</p> <ul style="list-style-type: none"> • explained in detail environmental conditions (e.g. fertile soils, ease of access to water) and economic conditions (e.g. price of land, availability of workforce) and give reasons why swamp in the Hikorangi region may be reinstated (e.g. positive impact on the ecosystem) • explained in detail how technological and economic factors are affecting the relationship between the primary industry and a spreading urban zone (e.g. by adopting less intrusive methods of frost control to prevent tension between the two parties) • explained in detail some economic reasons why farmers are using steep hill country for grazing animals (e.g. export figures for meat, wool, etc.) and some workforce reasons (new technology e.g. rotary sheds requiring fewer workers) for changing the use of traditional sheep and beef farmed country.
<p>Achieved with Excellence</p>	<p>Candidates who were assessed as Achieved with Excellence commonly:</p> <ul style="list-style-type: none"> • were able to justify the continuing trend in converting land to dairy over leaving to swamp in the Waikato region. Advantages and disadvantages were discussed and conclusions drawn in terms of economic and workforce considerations • were able to justify that changing land use on pasture land to swamp land will have a positive effect on the environment. Candidate statements were supported with accurate data from a range of sources • provided an analysis of the advantages and disadvantages of how a long term water supply will increase the intensification of land use. Economic, environmental and social aspects were considered • candidates supplied evidence such as potential increased income per hectare and recreational / social activities associated with the water to support their answers.
<p>Standard specific comments</p>	<p>Having a good understanding of how New Zealand has come to be such a strong farming nation is important. Candidates need to be aware of what has occurred in the past, why we have the different industries located in the regions they are, and possible alternatives to these depending on the impact of changing consumer demand or environmental change.</p>