

# 2015 NCEA Assessment Report

Agricultural and Horticultural Science Level 1 90919, 90921, 90924

## Part A: Commentary

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

- candidates did not ‘describe’ in sufficient detail and often made one or two word statements when describing how a management practice is carried out
- candidates gave generic explanations to explain why something is done e.g. “it makes it grow better”, or repeated an explanation for several actions
- candidates tend to jump to the extreme consequence to the plant or animal for example – if ‘x’ management practice is not done then ‘y’ will die, when often this would not be the case for some time rather a loss of production or reduced growth would occur
- excellence capable candidates wrote logical answers that addressed all the bullet points in the question and used comparisons of advantages and disadvantages that were relevant to the given situation.

## Part B: Report on standards

### 1. Assessment Report for 90919: Demonstrate knowledge of soil management practices

<b>Achieved</b>	<p>Candidates who were assessed as Achieved commonly:</p> <ul style="list-style-type: none"> <li>• demonstrated a basic understanding of the properties of soil</li> <li>• described the main steps involved with soil cultivation</li> <li>• described a sub-surface drainage system and its effect on soil properties</li> <li>• gave examples of the type of information given on a soil test</li> <li>• related the effect of liming on soil acidity.</li> </ul>
<b>Not Achieved</b>	<p>Candidates who were assessed as Not Achieved commonly:</p> <ul style="list-style-type: none"> <li>• gave generic statements that demonstrated very little understanding</li> <li>• failed to quantify or qualify their statements e.g. just stated “liming affects pH”, “drainage will increase earthworms”</li> <li>• described steps/actions for incorrect management practices e.g. steps to sow seeds rather than cultivate soil</li> <li>• described the effects of drainage as a ‘property’ of soils, rather than the effects of drainage as an installation</li> <li>• described effects of drainage only as being negative effects</li> <li>• confused the direction of pH change that resulted from the addition of lime (i.e. student confused the pH scale direction with respect to acidity/ alkalinity).</li> </ul>
<b>Achieved with Merit</b>	<p>Candidates who were assessed as Achieved with Merit commonly:</p> <ul style="list-style-type: none"> <li>• explained the effects of management practice steps on relevant soil properties and subsequently their suitability for germination, plant growth, and organism activity</li> <li>• gave inaccurate links between soil properties and plant processes and/or missed crucial links between why something occurred e.g. soil is warmer so allows plants to get nutrients.</li> </ul>
<b>Achieved with Excellence</b>	<p>Candidates who were assessed as Achieved with Excellence commonly:</p> <ul style="list-style-type: none"> <li>• justified the use of a management practice in terms of its effects on soil properties - covering all three (if relevant) and the flow-on effects to plant production</li> <li>• compared and contrasted the effect of management practices often in terms of the ‘whole-farm’ context (i.e. economic / ecological / future production).</li> </ul>

<b>Standard specific comments</b>	<p>Many candidates commit the ‘naturalistic’ fallacy in that what is natural must be good in their comparison of ‘natural nutrients’ in compost versus ‘artificial’ nutrients in synthetic fertiliser (i.e. compost is ‘better’ for soil because it contains ‘natural’ nutrients...).</p> <p>Candidates need to correct terms or concepts in reference to the context of the soil property. Many candidates are stating that too much water will ‘drown’ the plants, or that darker soils ‘attract’ sunlight, or that lime ‘neutralises’ soil.</p>
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## 2. Assessment Report for 90921: Demonstrate knowledge of livestock management practices

<b>Achieved</b>	<p>Candidates who were assessed as Achieved commonly:</p> <ul style="list-style-type: none"> <li>• described practices but made no or limited explanations as to why these were carried out</li> <li>• used correct jargon in their descriptions</li> <li>• interpreted the questions correctly</li> <li>• attempted most or all of the questions</li> <li>• wrote from extensive practical knowledge however only part of their answer was specific to the question.</li> </ul>
<b>Not Achieved</b>	<p>Candidates who were assessed as Not Achieved commonly:</p> <ul style="list-style-type: none"> <li>• wrote answers that were too brief in their description – only using one or two words</li> <li>• wrote a semi prepared answer that did not match up with the context that was being assessed</li> <li>• repeated or reworded a singular answer throughout the question</li> <li>• interpreted the question incorrectly</li> <li>• confused two concepts and wrote about the wrong one</li> <li>• used terms that were too basic e.g. healthy, sick, better.</li> </ul>
<b>Achieved with Merit</b>	<p>Candidates who were assessed as Achieved with Merit commonly:</p> <ul style="list-style-type: none"> <li>• wrote detailed descriptions of why management practices are carried out that went beyond basic descriptions</li> <li>• demonstrated understanding of the future consequences of management practices</li> <li>• provided limited comparisons between two options of management practices</li> <li>• used bullet points or statements to form their arguments rather than structured paragraphs.</li> </ul>
<b>Achieved with Excellence</b>	<p>Candidates who were assessed as Achieved with Excellence commonly:</p> <ul style="list-style-type: none"> <li>• articulated their knowledge in a clear and concise manner</li> <li>• wrote in paragraph format with logical structure e.g. one key idea per paragraph which included a comparison and/or contrast statement or a justification statement</li> <li>• compared and contrasted two management practices, using multiple examples of both the advantages and disadvantages of each practice</li> <li>• related their answers to the specific outline of the question.</li> </ul>
<b>Standard specific comments</b>	<p>A large number of candidates confused the management processes of vaccination and drenching.</p> <p>Candidates also confused or showed little understanding of the consequences of giving too little or too high a dose.</p> <p>Generally a poor understanding of Mendelian genetics in that candidates often stated that ‘rams contained genes that were more dominant than ewes’ and therefore their genes would always show over a ewes.</p> <p>Candidates were often unclear on what lactation was and many confused weaning as either the process of giving birth or the process of lactation.</p> <p>Many candidates jumped to the outcome of all situations causing death if management practices were not carried out correctly or promptly.</p>

### 3. Assessment Report for 90924: Demonstrate knowledge of horticultural plant management practices and related plant physiology

<b>Achieved</b>	<p>Candidates who were assessed as Achieved commonly:</p> <ul style="list-style-type: none"> <li>• gave responses which answered the question but did not describe how the plant processes were affected and how this impacted on plant growth</li> <li>• did not read the question in its entirety and therefore appeared to not get the whole meaning of the question</li> <li>• had a basic understanding of plant management practices.</li> </ul>
<b>Not Achieved</b>	<p>Candidates who were assessed as Not Achieved commonly:</p> <ul style="list-style-type: none"> <li>• demonstrated little understanding of how plant processes were influenced by plant management practices</li> <li>• gave confused or repetitive answers</li> <li>• had little understanding of plant management practices</li> <li>• left large parts of questions blank.</li> </ul>
<b>Achieved with Merit</b>	<p>Candidates who were assessed as Achieved with Merit commonly:</p> <ul style="list-style-type: none"> <li>• demonstrated links between why something was done</li> <li>• had a good understanding of plant management practices and knew a range of practices</li> <li>• compared two practices and could show evidence as to how they impacted on plant growth.</li> </ul>
<b>Achieved with Excellence</b>	<p>Candidates who were assessed as Achieved with Excellence commonly:</p> <ul style="list-style-type: none"> <li>• showed a good understanding of the effects practices had on plant growth and processes</li> <li>• were able to compare and contrast two management practices</li> <li>• linked management practices to plant quality and quantity</li> <li>• showed thinking beyond the question.</li> </ul>
<b>Standard specific comments</b>	<p>Candidates got confused with air flow and respiration.</p> <p>Candidates tended to get confused about glasshouse conditions: for example stating sunlight is a management practice, that the temperature cannot be controlled in them or that irrigation can only be set up inside a glasshouse not outside as well.</p> <p>There were some other common threads of confused understanding such as candidates stated that tomato plants die when they are outside in the summer time, that insecticides kill plants, or that cultivation is a practice for planting a tree.</p>