

National Certificate of Educational Achievement

2014 Assessment Report

Agricultural and Horticultural Science Level 1

- 90919 Demonstrate knowledge of soil management practices**
- 90921 Demonstrate knowledge of livestock management practices**
- 90924 Demonstrate knowledge of horticultural plant management practices and related plant physiology**

COMMENTARY

Candidates did not 'describe' very well and often just stated a word for the action and not the equipment used.

Candidates answered the reason (Merit) part of the action well, but did not describe the action very well.

Candidates tended to misinterpret subject specific language such as cultivation, tool types (spade vs shovel, garden fork vs pitch fork), distinction between herbicides and pesticides.

Excellence capable candidates are effectively using comparison of advantages and disadvantages of the given management practices to achieve the higher grades.

STANDARD REPORTS

90919 Demonstrate knowledge of soil management practices

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- demonstrated a basic knowledge of soil properties in relation to plant growth
- correctly identified or described equipment used to carry out management practices
- provided practical explanations for their selection of a particular management practice
- wrote statements that did not explain how the effect on soil occurred or stated the end result with no explanation e.g. "compost adds micro-organisms which help hold the soil together".

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- provided irrelevant information concerning plant requirements for respiration and photosynthesis
- used incorrect terms e.g. too much water 'drowns' plants
- provided examples of equipment that would NOT be used to carry out given management practices, or did not give sufficient detail as to the equipment used
- argued that the primary purpose of irrigation was the provision of nutrients.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- made several links within the question as to how the soil properties were affected and how these in turn affected plant growth
- explained with detail how management practices affected more than one property of soil

- identified how management practices affect soil conditions necessary for particular aspects of plant growth.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- provided multiple justifications for the selection of a given soil management practice
- linked justifications to physical, chemical, and biological properties of soil, and to plant growth, within the context of the question
- wrote concise answers with little or no conceptual repetition or redundancies
- gave detailed explanations of the benefits of a selected solution in terms of “flow-on” effects (e.g. in terms of time savings to the producer/farmer, on-going maintenance costs, soil conservation considerations etc.)
- integrated concepts of soil chemistry in explaining the purpose/benefits of soil management practices
- demonstrated the ability to link cause and effect in their discussions.

OTHER COMMENTS

Candidates tended to misunderstand what was meant by inorganic fertiliser – either stating that they were toxic chemicals that would harm the environment, or appealing to the “naturalistic fallacy” by claiming what is ‘natural’ is therefore good without qualification or further explanation

90921 Demonstrate knowledge of livestock management practices

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- demonstrated sound knowledge of a variety of agricultural practices
- wrote detailed descriptions stating how, what, why and when practices are carried out
- used data provided to write answers
- made no link between the description and why the management practice is carried out
- used correct terms (both scientific and agricultural) rather than slang words.

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- wrote brief answers or did not provide answers to all parts of each question
- wrote answers that were not related to the question
- repeated or reworded the question as their answer.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- were able to extract, use, and make reference to data from the table
- wrote detailed explanations as to why a management practice was carried out
- used the table and graph to assist with the clarification of a description or explanation.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- wrote clear, concise logical answers within the spaces provided in the answer booklet
- wrote in paragraph format and restricted each paragraph to one key idea which also contained a comparison and/or contrast statement or a justification statement
- wrote succinct answers that compared the advantages and disadvantages of a given management practice
- related their justifications back the specific situation outline in the question.

OTHER COMMENTS

A large number of candidates confused the management practice of vaccination with drenching.

Candidates often gave brief or simplified reasons as to why a livestock management practice was carried out.

90924 Demonstrate knowledge of horticultural plant management practices and related plant physiology

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- demonstrated a good basic knowledge of plant management practices
- showed their physiological knowledge but did not always relate it to the question
- described several actions or steps done when carrying out a management practice.

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- repeated their descriptions or reworded the question
- wrote answers that did not relate to the question
- gave points that were vague or not well described.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- wrote explanations for each action or step and linked those reasons to plant growth
- used terminology correctly
- related plant physiology to specific plant functions.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- clarified their answers linking their comparisons to their chosen management practice
- linked plant physiology to the chosen management practice and its effect on plant growth and quality
- used their knowledge of soils to complement their answers
- wrote concise answers with logical arguments.

OTHER COMMENTS

Many candidates tended to state the effect a management practice would have without actually stating how or why this effect would occur for example stating that chemicals can affect non-target plants but not saying how this is so e.g. mentioning spray drift.