

National Certificate of Educational Achievement

2011 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

With the introduction of Grade Score Marking during examination marking, the requirements for each grade when writing answers are now more transparent. Candidates need several points of description, explanation, or comparison for all three achievement grades. This enables quantitative measurement to be used to recognise the quality of answers during the marking process.

The review of the Agricultural and Horticultural achievement standards for the 2011 year resulted in more emphasis being placed on the management practices for soils, livestock, and horticultural plants. A weak area in candidates' answers was a knowledge of the steps or actions that occurred within a particular management practice. Included within this knowledge should be the reasons or explanation for the steps or actions. Practical experience of the management practices reinforces the theoretical learning stated in the achievement standard.

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 typically:

- provided basic facts
- described how soil compaction can be reduced
- described the form of compost/ effluent and how it was applied
- described how and when lime was spread
- described the properties of soil.

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 typically:

- did not attempt all questions
- wrote incomplete answers
- did not use the information provided when answering questions
- demonstrated limited understanding of soil properties
- showed limited understanding of terminology and concepts relating to physical, chemical, and biological characteristics of soil
- misinterpreted the term "growth requirements of plants"
- showed limited understanding of management practices that related to soil compaction or soil fertility
- showed limited understanding of the effects of irrigation or liming.

ACHIEVEMENT WITH MERIT

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

- related plant processes to the management practice in the question
- explained the effects of management practices on the physical, chemical, and biological properties of soil
- focused their answer on the bulleted points made in the question
- showed a wide understanding of management practices including irrigation and crop rotation.

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 typically:

- explained both management practices in detail
- focused their answer on the bulleted points given in the question
- justified the selected management practice by giving clear comparisons in their answer
- considered the wider implication of a given management practice.

90921 Demonstrate knowledge of livestock management practices

ACHIEVEMENT

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

- used the diagrams to support their answer
- showed understanding of how to carry out management practices.

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 typically:

- wrote one or two words as an answer
- wrote an answer unrelated to the question.

ACHIEVEMENT WITH MERIT

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

- explained why the steps within the management practice were necessary
- highlighted key words in the question and wrote answers that were focused on these key words.

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 typically:

- answered with clear comparisons and justifying with reasons
- indicated they had some practical experience of skills they wrote about.

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 typically:

- demonstrated basic knowledge of plant management practices and some plant physiology
- attempted all questions
- recognised and used key words e.g. photosynthesis, fungal diseases, competition, xylem, root hairs
- appeared to have practical experience of plant management practices
- wrote sentences rather than giving just one-word answers.

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 typically:

- did not answer all questions
- had inaccurate knowledge e.g. many candidates still believed oxygen is required for photosynthesis
- did not read the question fully or appeared to have misunderstood the terminology and thus gave the wrong answer e.g. Q1(b)(ii) where a “non-chemical” method of control was asked for and candidates suggested fungicide sprays
- showed a lack of practical experience, particularly in elementary tasks such as pruning
- showed little understanding of what a rose bush looks like, despite mention of this as a focus in the Assessment Specifications.

ACHIEVEMENT WITH MERIT

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

- linked management practices to plant requirements and/or physiology
- wrote extended answers to demonstrate knowledge
- used the bullet points in the question as the basis for a plan ensuring they answered each point
- explained why management practices were used, particularly with pruning.

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 typically:

- demonstrated a comprehensive (accurate and detailed) knowledge of plant management practices and plant physiology, linking practices with the effect on plant growth
- wrote extended answers showing sufficient critical thinking for justification
- gave both depth (detail) and breadth in their answers, showing a strong basis of understanding of essential concepts at this level
- covered several points when comparing and contrasting two different practices.