



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

National Qualifications Framework Levels 1-3, 2003

Agricultural and Horticultural Science

National Moderator's Report

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General Guidance for Assessors of Achievement and Unit Standards

The purpose of external moderation is to provide reassurance that assessor judgements are at the national standard and are made on the basis of assessment activities that are fair and valid.

All assessment materials are expected to:

- give the learner the opportunity to meet the requirements of the standard
- have an assessment schedule that gives evidence of appropriate learner responses and clear judgements at all levels.

The Ministry of Education contracted subject experts to write assessment resources for achievement standards. These are not pre-moderated. The intention is that they are modified to suit teaching programmes and learner needs. They do not provide 'rules' but suggest different ways of assessing to the nationally registered standard.

General Overall Comment – Moderation mainly involved internally assessed achievement standards but there is a trend towards the increased use of unit standard assessment. Assessor judgements showed some variation at the higher levels of achievement.

Level One

90156 Carry out a practical agriculture or horticulture investigation with direction

Evidence relating to the first criterion, planning the *investigation*, can be provided from learner answers to questions and in their written *plan*. Often the written plan aided by diagrams gives clearer details and understanding of the plan. At the Merit and Excellence level of achievement, the range of values for the independent variable is required.

The level of detail provided determines the difference between a *feasible* and a *workable* plan. At Excellence the *workable* plan is a 'recipe' inclusive of figures and units.

Evidence for the second criterion, *recording* data, can take several formats but it is important that data in tables is identified and that, at the higher levels of achievement, units of measurement are clearly stated. Recording data (the second criterion) allows learners to provide evidence in a number of ways. For Merit and Excellence, data in tables should be identified and units of measurements need to be clearly stated.

The third criterion, processing and reporting, requires an interpretation of what the collected data means; whilst at Merit and Excellence, a valid *conclusion* that is *linked to the aim/purpose/hypothesis* must be provided. Processing and presenting information in a graphical format has indicated that learners have a reasonable grasp of the mathematics involved but fail to show an appreciation of why repeats are necessary for validity. A common error involves learners repeating the *investigation*, averaging the results and then proceeding to graph each of the repeats instead of graphing the averaged data, which prevents learners from reaching Merit or Excellence.

An *evaluation* of the *investigation* or *discussion* of the science ideas is mandatory for the award of Excellence and is the main determinant for achievement with Excellence. Any *evaluation* must display a level of critical thinking beyond stating what went well or badly.

90157 Demonstrate practical knowledge and skills in agriculture or horticulture production

The focus of the standard is on performing tasks. A variety of assessment materials was submitted for moderation and in several cases the material did not meet requirements or was deficient in some areas.

The first criterion requires learners at the Achievement level to *recognise materials, equipment, products, and conditions*. This implies that they can *recognise* in **all** these categories and not just numerous plants or hand tools. At Merit and Excellence levels, learners must *recognise a range within materials, equipment, products, and conditions*. The word 'range' implies that several different types of materials, equipment, products, and conditions are recognised.

The second criterion requires learners to demonstrate practical skills, and the levels of achievement reflect how well these skills were demonstrated. At the Achievement level, (*satisfactory skills*), learners must perform a range of *skills* to a level where the task is carried out in a safe manner, eg, the wire knots will hold under pressure and, in doing so, wire was not whipping around the face, and residual wire was picked up. At Merit level, the *skill* is performed using the correct sequence and the finished article is neat, eg, knots are tidy with no ends extruding that could cause damage. At the Excellence level, the task is performed well within an accepted time frame.

Moderators do not need to see the physical evidence of the *practical skills*, no videos, no boxes of cuttings, etc. They do need to see the criteria used to allocate the different levels of achievement in the *practical skills* section. Submitting the result sheet is not sufficient.

Level Two

90450 Carry out a practical agricultural or horticultural investigation with supervision

Assessors who assessed against this standard used variations on the themes given in the TKI website exemplars and most used the accompanying template material.

Essentially this standard is the same as 90156 except that in this case, learners work under 'supervision' and not 'direction'; it is this aspect that causes some concern. Explanatory Note 5 states 'With supervision means that the teacher gives students guidelines for the investigation such as the context for the *investigation*, equipment available or chemicals to use.' Learners then design, complete and report on the investigation using the guidelines provided. *Supervision* may include discussion with learners in order to clarify ideas. It is not acceptable to use the template material used for 90156.

The second criterion relating to '*data appropriate to the investigation*' has a sufficiency of data requirement. The use of one plant for each treatment does not fulfil this requirement. Comments made for 90156 regarding graphical presentation of results also apply to 90450.

Attention is drawn to the requirement for both an *evaluation* and a discussion for the award of Excellence. The quality of the *evaluation* is embodied in the wording of Explanatory Note 7.

90456 Examine and redesign landscaped area(s)

The first criterion requires learners to '*draw simple concept plan(s) and simple planting diagram(s)*'. This wording suggests one or more *plans/diagrams*; asking learners for four *plans/diagrams* is, therefore, excessive.

The Excellence requirement for the third criterion requires learners to '*resolve any conflicts*'. Submitted material did not make it clear to learners as to how this requirement is to be addressed. By redesigning the *plan* any potential *conflicts* should have been resolved but it would be desirable to make this requirement explicit in the activity.

90455 Describe how livestock behaviour impacts on productivity

Assessors have a clear understanding of the national standard, assessment activities are appropriate and judgements are accurate.