



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

National Qualifications Framework Levels 1–3, 2005

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 judgments are at the national standard and are made on the basis of assessment materials 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 judgments 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

Assessors should be aware of the latest registered versions of achievement standards. Assessors are urged to consult the New Zealand Qualifications Authority website for the latest versions of the achievement standards at any level and the Ministry of Education's website for the most recently developed, or modified, exemplar materials. The version number required on the cover sheets refers to the achievement standard **not** the version of the Ministry exemplar.

Providers should be aware that they can change the context of the Ministry exemplars without affecting the validity of the task. Where significant changes are made to the exemplar materials changes need to be made in the schedule. It is suggested that changes to exemplars should be minor, such as changing a horticulture focus to an agriculture focus, or vice versa. If the provider wishes to make widespread changes it is advisable to disregard the exemplar material. Providers are encouraged to develop their own assessment materials.

Unit standards are in the process of being revised but any changes will not impact on work carried out in 2006.

AS 90156: Carry out an agricultural or horticultural investigation with guidance

This standard has a single criterion with greater emphasis being placed on the ability of the plan to test the validity and accuracy of the aim or hypothesis. Group work is permissible at the planning stage, a development that will ease pressure on resources. However, if group work is undertaken the provider must provide evidence that each learner has contributed to the development of the plan. This could be achieved by a grid of learner names containing criteria relating to involvement.

Learners are required to identify both the dependent and independent variables at all levels of achievement. There is a requirement for learners to provide a range for the independent variable, eg it is no longer acceptable to investigate the effect of time of soaking seeds by selecting non-soaked and soaked for 24 hours. The expectation is that learners will soak seeds over a range of time intervals. Old exemplars are still being used. Likewise, investigations comparing 'with and without fertiliser' or 'with and without water' should be avoided.

The main determining factors at Merit level are the quality of the plan and the quality of data processing. Learners who conduct multiple trials but then proceed to graph the results of all trials,

not the averaged data, are not working at Merit level. A valid conclusion is now required at Merit level while evidence of critical thinking is required for Excellence.

AS 90157: Demonstrate practical skills in agriculture or horticulture production

The intent of this standard is to assess practical abilities. Most assessors are correctly adapting exemplar materials to suit local needs but in some cases assessors require learners to ‘explain’ why certain techniques or equipment are used. The standard does not require explanations at any level of achievement. The awarding of grades for the practical skills section requires criteria such as safety, time, etc, expressed in the explanatory notes of the standard to be met. Currently providers are stating criteria but not which criteria are required for the award of different levels of achievement.

Assessors are reminded that a range of equipment, materials, plants/animals and conditions must be provided so that learners can achieve at any level. Asking questions that pertain only to plants, eg names, uses, etc, does not meet the criteria.

US 18984: Describe plant parts and their functions

The following comment was made in the 2004 report.

“A very popular unit standard with all assessors using material developed by Science Educators. The use of matching lists constitutes a form of ‘description’, however, the question relating to the glasshouse diagram does require attention in terms of intent and space for learner responses. Some questions relating to management are outside the scope of the standard and could be removed. The schedule does recognise that evidence from such questions is not required for achievement of the standard.”

Few providers have attempted to amend the task in line with this statement.

AS 90450: Carry out an agricultural or horticultural investigation with supervision

This standard has a single criterion. The intent of the standard is that learners plan their own investigation that extends over a period of time, unlike the level 1 standard where the plan could be carried out in a single class period. The expectation is that learners will carry out their own plan and that plans will reveal differences in wording if a common task is set.

Revised versions of the original exemplars *Growing Chickens* and *Cuttings* are available on the Ministry of Education website.

AS 90455: Describe how livestock behaviour impacts on productivity

This standard has a single criterion. While this standard is popular in agriculture-oriented courses, providers are reminded that a new generic exemplar is available on the Ministry of Education website. At Achieved and Merit level, learners are required to describe/explain how interactions between behaviour and management impact on productivity within a production system. There is a tendency to create tasks that include a range of livestock species and production systems. It is accepted that many production systems have more than one livestock species and in pig, dairy and poultry production there is only one species. The argument involves tasks that have an unlikely mix of livestock, eg pigs, dairy cows and deer.

AS 90456: Examine and redesign landscape areas

Only a small number of providers offered this standard in 2005 and it is assumed alternative unit standards continue to be more popular with horticulture providers. A new exemplar *Local Landscapes* is available on the Ministry of Education website. Previous exemplar materials will require significant modification before being used again.

AS 90649: *Research the production and marketing of a locally produced primary product*

level 3 standards have been revised and the newly registered standards are on the Qualifications Authority website. In light of the changes to this standard, the Ministry exemplar has been modified to reflect changes made to this standard. It now has a changed title, a single criterion, a six-credit value and an emphasis on the production process and its linkage with the marketability of the product.

In 2005, at least two factors affecting supply and two factors affecting demand had to be explained at all levels of achievement. Many explanations accepted for all criteria were, at best, descriptions. It is essential that, when explaining management practices used, learners establish linkages between the management practice and the product required by market opportunities. It was common for learners to copy large extracts from sources of secondary data dealing with production, but not determine the key aspects affecting marketability. Concerns expressed in 2004 by moderators over the acceptance by some assessors of inferior learner work for the award of Merit and Excellence appears to have been heeded.

Assessors are reminded that where oral evidence is sought to clarify deficiencies in written projects in a resubmission situation, written evidence of such information must be provided for moderation purposes.

AS 90650: *Investigate production and marketing of a nationally significant primary product*

This standard has been through the revision process and only minor changes have been made. The information-gathering techniques to be used are stipulated in Explanatory Note 3 and conflicts over secondary data, field trips and grower interviews have been clarified. The Ministry of Education exemplar has been modified to accommodate these changes.

Materials moderated in 2005 indicate that assessors had a clearer understanding of requirements and the selections of primary products were more conducive to the range of techniques employed. While all surveys focused on products that could be consumed in raw form, or after cooking, there is scope for surveys when determining the aspects of production.

In common with 2004, the main weakness was making linkages between production and marketing, using the information learners had found out.