

Main changes resulting from the review

- All NZC Level 8 (NZQF Level 3) outcomes derived from the NZC are now assessed using achievement standards, and there are no longer any unit standards linked to the NZC.
- Existing achievement standards were reviewed and new achievement standards were developed to align with the NZC. See [table](#) below.
- Grading criteria for achievement standards were reviewed in accordance with the Standards Review Guidelines.
- Unit standards that recognised similar outcomes as achievement standards were recommended for expiry. See [table](#) below.

For a detailed description of the review of, and the changes to, the *Agricultural and Horticultural Science standards* see the appendix at the end of this report.

Impact on Consent and Moderation Requirements (CMR)

All new achievement standards have been registered on CMR 0233.

Impact of changes on [Exclusions List](#)

For transition purposes, the following exclusions will apply for new achievement standards.

Achievement standard	Excluded against each of these standards
91528	7089, 90650
91529	90649
91530	7087, 90651
91531	7088, 7089, 7090, 90652
91532	90653

Review Categories and changes to classification, title, level, and credits

The following summary shows the changes made to the standards as a result of the review. All changes are in **bold**. Where a new or a new version of an externally assessed achievement standard is registered, the following designation appears after the title **[Externally Assessed]**.

Key to review category
A Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C Major changes that necessitate the registration of a replacement achievement standard with a new ID
D Achievement standard will expire and not be replaced

Externally assessed achievement standards categorised as category C expire at the end of	December 2012
Internally assessed achievement standards and unit standards categorised as category C expire at the end of	December 2013

Sciences > Science > Agricultural and Horticultural Science

ID	Ref	Title	Level	Credit	Review Category
7087		Analyse and evaluate relationships between market forces and a primary product	3	8	C
90651	3.3	Explain how market forces affect supply and demand of primary products	3	4	C
91530	3.3	Demonstrate understanding of how market forces affect supply of and demand for New Zealand primary products [Externally Assessed]	3	5	
7088		Investigate primary product attributes for specific market opportunities	3	6	C
7089*		Analyse a husbandry practice within a schedule of operations for a primary product	3	5	C
7090		Investigate, with guidance, the effectiveness of production processes to achieve product attributes	3	8	C
90652	3.4	Explain market requirements and the production process for a nationally significant primary product	3	6	C
91531	3.4	Demonstrate understanding of how the production process meets market requirements for a New Zealand primary product(s) [Externally Assessed]	3	4	
7089*		Analyse a husbandry practice within a schedule of operations for a primary product	3	5	C
90650	3.2	Investigate production and marketing of a nationally significant primary product	3	4	C
91528	3.1	Carry out an investigation into an aspect of a New Zealand primary product or its production	3	4	
90649	3.1	Research the production of a marketable, locally produced primary product	3	6	C
91529	3.2	Research and report on the impact of factors on the profitability of a New Zealand primary product	3	6	
90653	3.5	Analyse a primary production environmental issue	3	4	C
91532	3.5	Analyse a New Zealand primary production environmental issue [Externally Assessed]	3	5	

*please note this standard appears in the table more than once.

Appendix

Development of Level 3 Agricultural and Horticultural Science Standards

Process of Aligning Standards with the New Zealand Curriculum

The knowledge base of Agricultural and Horticultural Science aligns with achievement objectives from the Science, Social Science, and Technology Learning Areas of the NZC, which reflects its applied nature. Some of the detail from the Explanatory Notes in the standards has been moved to the Teaching and Learning Guide.

Conditions of Assessment provide guidelines on the assessment of the internal standards; Assessment Specifications on the NZQA website provide guidelines on the assessment of external standards. The *Teaching and Learning Guide for Agricultural and Horticultural Science* provides guidance on opportunities to develop students' capabilities in key competencies, values, and principles for the 21st century learner in the NZC.

'Agribusiness' is a term widely used in the primary production industries to describe the financial, market-driven nature of modern primary production. This dominates the thinking and actions of all commercial growers.

Addressing Duplication

All curriculum-based Level 3 unit standards have been recommended for expiry due to significant overlap of teaching and learning outcomes with achievement standards.

Addressing Credit Parity

The credit value of AS3.3 and AS3.5 have been increased to five credits, while AS3.4 has been reduced to four credits to better reflect the teaching and learning time involved.

External and Internal Assessment

There has been no change to the number of external and internal achievement standards.

The internally assessed achievement standards provide opportunities for a range of assessment methods, with possible practical applications in either Agriculture or Horticulture.

Current externally assessed standards remain, however the content has been reviewed and revised in considering the links to the NZC achievement objectives.

What Has Changed?

The existing unit standards were designated expiring due to lack of use and overlap with achievement standards.

Please see table above for an indication of the replacement relationships between expiring unit standards and the newly registered achievement standards.

Internally assessed standards

AS3.1 *Carry out an investigation into an aspect of a New Zealand primary product or its production*

This standard focuses on the Level 8 Investigating in Science achievement objective in the Science Learning area, and requires direct involvement in the practical investigation of a primary product or its production. This approach differs from the use of three information gathering techniques that existed in 90650.

AS3.2 *Research and report on the impact of factors on the profitability of a New Zealand primary product*

This standard requires the researching and reporting on the impact of factors on profitability of a New Zealand primary product. The outcome places greater emphasis on the research process, and has been clarified to provide better guidance for students. Explanatory Notes have been amended to better clarify the intent of the standard. AS3.2 replaces 90649.

Externally assessed standards

The multiple criteria in the former standards have been collapsed to a single criterion that allows for more holistic assessment decisions to be made. Explanatory Notes for each standard have been amended to better clarify the intent of the standard.

Changes were made to the credit values to better reflect the time required to achieve the standards.

AS3.3 *Demonstrate understanding of how market forces affect supply of and demand for New Zealand primary products*

Replaced 90651. Credit value increased from 4 to 5.

AS3.4 *Demonstrate understanding of how the production process meets the market requirements for a New Zealand primary product(s)*

Replaced 90652. Credit value decreased from 6 to 4.

AS3.5 *Analyse a New Zealand primary production environmental issue*

Replaced 90653. Credit value increased from 4 to 5.