

Achievement Standard

Subject Reference Agricultural and Horticultural Science 1.1

Title Carry out a practical agricultural or horticultural investigation

Level 1 **Credits** 4 **Assessment** Internal

Subfield Science

Domain Agricultural and Horticultural Science

Status Registered **Status date** 17 December 2010

Planned review date 31 December 2020 **Date version published** 20 November 2014

This achievement standard involves carrying out a practical agricultural or horticultural investigation by planning the investigation, collecting and processing the data, and interpreting and reporting the findings.

Achievement Criteria

| Achievement | Achievement with Merit | Achievement with Excellence |
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| <ul style="list-style-type: none"> Carry out a practical agricultural or horticultural investigation. | <ul style="list-style-type: none"> Carry out an in depth practical agricultural or horticultural investigation. | <ul style="list-style-type: none"> Carry out a comprehensive practical agricultural or horticultural investigation. |

Explanatory Notes

- This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and based on the outcomes in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz/>.
- An *investigation* is an activity covering a complete process: planning; collecting, recording, and processing data; interpreting; and reporting on an investigation. It will involve the student in the collection of primary data.
- A *practical agricultural or horticultural investigation* involves:
 - a statement of the purpose – this may be an aim, testable question, prediction, or hypothesis based on a scientific idea
 - identification of a range for the independent variable or sample
 - measurement of the dependent variable
 - collecting, recording and processing data relevant to the purpose
 - a conclusion based on interpretation of the processed data.

An in-depth practical agricultural or horticultural investigation involves:

- a method that describes a valid range for the independent variable or sample; a description of, and/or control of, other variables; the collection of sufficient data
- collecting, recording and processing of data to enable a trend or pattern (or absence) to be determined
- a valid conclusion based on interpretation of the processed data that links to the purpose of the investigation.

A comprehensive practical agricultural or horticultural investigation involves:

- a method that describes a valid range for the independent variable or sample; a description of, and control of, other variables; the collection of sufficient data with consideration of factors such as sampling, bias, and sources of error
- an evaluation that explains how the method used produced valid and reliable data to support a valid conclusion.

- 4 Conditions of Assessment related to this achievement standard can be found at <http://ncea.tki.org.nz/Resources-for-Internally-Assessed-Achievement-Standards>.
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Quality Assurance

- 1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0233