



St Andrew's College

Year 12 Agriculture 2016

Student Information



Teaching programme

Details of the achievement standards and their specifications

Field Trips

Year 12 Agriculture

Course outline

This course builds on to the Level One Course, but requires a deeper understanding and the ability to reason and justify course of action a farmer may choose to undertake. For this reason it is imperative that a solid effort both inside and outside the classroom prevails for the entire year.

The exams and some of the assessment content has changed this year as the standards have been altered to better reflect the new curriculum.

Two external achievement standards and **three internal** achievement standards make up this year's course work of 20 credits.

Internal Assessment

Three opportunities will be provided to complete internal Achievement Standards throughout the year and the credits for these will total 12 credits.

The internals will be spread throughout terms one, two and three. The material for assessment will be a combination of workbooks and in-class exams.

PLEASE NOTE: **NO reassessment** opportunities are provided for **ANY** of the following internals in Year 12.

Internals

AS:91298	Report on the environmental impact of the production of a locally produced primary product 2.10	4 credits	Internal 30 th March
AS:91293	Demonstrate understanding of livestock reproductive techniques in commercial production in NZ. Ag/Hort 2.5	4 credits	Internal 4 th June
AS 91295	Demonstrate understanding of interactions between livestock behaviour and NZ commercial management practices Ag/Hort 2.7	4 credits	Internal 28 th July

External Exams: 14th November 2016

AS:91294	Demonstrate understanding of how NZ commercial management practices influence livestock growth and development. Ag/Hort 2.6	4 credits	External
AS:91294	Demonstrate understanding of land use for primary production in New Zealand Ag/Hort 2.9	4 credits	External

Field Trips

The calendar below details the approximate dates and details for field trips this year. All dates are subject to change as they are subject to approval from management and the availability of those we are visiting.

There will be a combination of day trips made available throughout the year for students to gain wider knowledge towards their assessments. These dates may be subject to calendar changes.

Proposed day trips are:

- **8th March** Focus "The environmental impact of dairying"- (internal 2.10)
- **Thursday 26th May** XCell Breeding Centre: Focus "Animal Reproduction"- (internal 2.5)
- **Thursday 23rd June Canterbury environs:** Changing Land Use, Animal Growth and Production, and Animal Behaviour, (Externals 2.9, 2.6 and Internal 2.7)

Major Field Trip

Date: June 23rd 2016: Note this will require an early start 7.30am and LATE return to school of approximately 6pm

Achievement Standard

Subject Reference	Agricultural and Horticultural Science 2.10				
Title	Report on the environmental impact of the production of a locally produced primary product				
Level	2	Credits	4	Assessment	Internal
Subfield	Science				
Domain	Agricultural and Horticultural Science				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2014	Date version published	17 November 2011		

This achievement standard involves reporting on the environmental impact of the production of a locally produced primary product.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Report on the environmental impact of the production of a locally produced primary product.	<ul style="list-style-type: none">Report effectively on the environmental impact of the production of a locally produced primary product.	<ul style="list-style-type: none">Report comprehensively on the environmental impact of the production of a locally produced primary product.

Explanatory Notes

- 1 This achievement standard is aligned with *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2011 at <http://seniorsecondary.tki.org.nz/>.
- 2 *Report on the environmental impact* involves an explanation of how production of a locally produced primary product impacts on the environment.

Report effectively on the environmental impact involves a considered explanation of how production of a locally produced primary product impacts on the environment. A considered explanation includes pertinent information extracted from the data about impact.

Report comprehensively on the environmental impact involves a concise, coherent and accurate evaluation of the overall impact of the production of a locally produced primary product on the environment. The overall impact includes the balance between positive and negative impacts.

- 3 *An environmental impact* is one that has current and/or long-term effects. These effects may impact on organisms and the quality of air, water, or soil.
 - 4 Conditions of Assessment related to this achievement standard can be found at <http://www.tki.org.nz/e/community/ncea/conditions-assessment.php>.
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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

Achievement Standard

Subject Reference	Agricultural and Horticultural Science 2.5				
Title	Demonstrate understanding of livestock reproductive techniques in commercial production in New Zealand				
Level	2	Credits	4	Assessment	Internal
Subfield	Science				
Domain	Agricultural and Horticultural Science				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2014	Date version published	17 November 2011		

This achievement standard involves demonstrating understanding of livestock reproductive techniques in commercial production in New Zealand.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Demonstrate understanding of livestock reproductive techniques in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate in-depth understanding of livestock reproductive techniques in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate comprehensive understanding of livestock reproductive techniques in commercial production in New Zealand.

Explanatory Notes

- 1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2011 at <http://seniorsecondary.tki.org.nz>.
- 2 *Demonstrate understanding* involves describing the steps taken when performing each reproductive technique. Reference to the structure of livestock reproductive systems is required.

Demonstrate in-depth understanding involves an explanation of how the steps taken when performing each reproductive technique influence the success of the reproductive technique. Reference to livestock reproductive systems and the hormonal control relevant to the technique is required.

Demonstrate comprehensive understanding involves justification for the use of a selected reproductive technique in terms of timing, quantity and genetic potential, and the economics of production.

- 3 Techniques may include:
 - artificial insemination in livestock (cervical and uterine)
 - sire recording and selection
 - scanning
 - flushing
 - induction
 - embryo transfer
 - artificial hormone application (eg CIDR).

 - 4 Conditions of Assessment related to this achievement standard can be found at <http://www.tki.org.nz/e/community/ncea/conditions-assessment.php>.
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Replacement Information

This achievement standard and AS91291 replaced AS90453.

Quality Assurance

- 3 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

- 4 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

Achievement Standard

Subject Reference	Agricultural and Horticultural Science 2.6				
Title	Demonstrate understanding of how NZ commercial management practices influence livestock growth and development				
Level	2	Credits	4	Assessment	External
Subfield	Science				
Domain	Agricultural and Horticultural Science				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2014	Date version published	17 November 2011		

This achievement standard involves demonstrating understanding of how management practices influence livestock growth and development in commercial production in New Zealand.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Demonstrate understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate in-depth understanding of how management practices influence livestock growth and development in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate comprehensive understanding of how management practices influence livestock growth and development in commercial production in New Zealand.

Explanatory Notes

- This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2011 at <http://seniorsecondary.tki.org.nz>.
- Demonstrate understanding* involves describing how management practices influence livestock growth and development in commercial livestock production in New Zealand.

Demonstrate in-depth understanding involves explaining how management practices influence livestock growth and development in commercial livestock production in New Zealand.

Demonstrate comprehensive understanding involves evaluating how management practices influence livestock growth and development in commercial livestock production in New Zealand. This may involve justifying, comparing and contrasting, and analysing.

- 3 *Management practices* used in commercial livestock production refers to actions taken that impact on the quantity, quality, timing, and economics of production.
- 4 Assessment Specifications for this achievement standard can be accessed through the Agricultural and Horticultural Sciences Resources page found at <http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/>.

Replacement Information

This achievement standard and AS91292 replaced AS90454.

Quality Assurance

- 5 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 6 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

Achievement Standard

Subject Reference	Agricultural and Horticultural Science 2.7				
Title	Demonstrate understanding of interactions between livestock behaviour and NZ commercial management practices				
Level	2	Credits	4	Assessment	Internal
Subfield	Science				
Domain	Agricultural and Horticultural Science				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2014	Date version published	17 November 2011		

This achievement standard involves demonstrating an understanding of interactions between livestock behaviour and management practices in commercial production in New Zealand.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Demonstrate understanding of interactions between livestock behaviour and management practices in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate in-depth understanding of interactions between livestock behaviour and management practices in commercial production in New Zealand.	<ul style="list-style-type: none">Demonstrate comprehensive understanding of interactions between livestock behaviour and management practices in commercial production in New Zealand.

Explanatory Notes

- 1 This achievement standard is derived from *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2011 at <http://seniorsecondary.tki.org.nz>.
- 2 *Demonstrate understanding* involves describing the interactions between livestock behaviour and management practices in commercial production in New Zealand. This involves descriptions of how

management practices take account of livestock behaviours and how livestock respond to different management practices.

Demonstrate in-depth understanding involves explaining the interactions between livestock behaviour and management practices in commercial production in New Zealand. This involves explanations of how management practices take account of livestock behaviours and how livestock respond to different management practices.

Demonstrate comprehensive understanding involves evaluating the interactions between livestock behaviour and management practices in commercial production in New Zealand. This involves comparing and contrasting or justifying the use of these management practices in response to livestock behaviours.

3 *Commercial production* includes aspects such as:

- efficiency of farm operations
- livestock growth rate
- death rate
- quality and quantity of product
- farmer safety
- animal welfare
- market access.

4 *Management practices* refers to actions taken that impact on the quantity, quality, genetic potential, timing, and the economics of production.

5 Conditions of Assessment related to this achievement standard can be found at <http://www.tki.org.nz/e/community/ncea/conditions-assessment.php>.

Quality Assurance

7 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.

8 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.

Achievement Standard

Subject Reference	Agricultural and Horticultural Science 2.9				
Title	Demonstrate understanding of land use for primary production in New Zealand				
Level	2	Credits	4	Assessment	External
Subfield	Science				
Domain	Agricultural and Horticultural Science				
Status	Registered	Status date	17 November 2011		
Planned review date	31 December 2014	Date version published	17 November 2011		

This achievement standard involves demonstrating understanding of land use for primary production in New Zealand.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none">Demonstrate understanding of land use for primary production in New Zealand.	<ul style="list-style-type: none">Demonstrate in-depth understanding of land use for primary production in New Zealand.	<ul style="list-style-type: none">Demonstrate comprehensive understanding of land use for primary production in New Zealand.

Explanatory Notes

- 1 This achievement standard is aligned with *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Agricultural and Horticultural Science*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz/>.
- 2 *Demonstrate understanding* involves explaining the factors that determine traditional, current, and future land use for primary production in New Zealand.

Demonstrate in-depth understanding involves a detailed explanation of the factors that determine traditional, current, and future land use for primary production in New Zealand.

Demonstrate comprehensive understanding involves evaluating the factors that determine traditional, current, and future land use for primary production in New Zealand. This may involve justifying, comparing and contrasting, and analysing.

- 3 Traditional *land use* is that which has been commonly practised in an area for generations.
 - 4 The factors that have determined land use include economic, environmental, technological, social, political and workforce considerations.
 - 5 Assessment Specifications for this achievement standard can be accessed through the Agricultural and Horticultural Science Resources page found at <http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/>.
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Quality Assurance

- 9 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 10 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

Assessment Specifications- 2016

General information

Domain Agricultural and Horticultural Science

Level 2

Mode of Assessment Written Examination

For Year 2013

Standards 91294, 91297

Exam date: November 23rd 2016

Specific information for individual external achievement standards

Standard 91294

Title Demonstrate understanding of how NZ commercial management practices influence livestock growth and development

Number of Credits 4

Content / context details

Candidates will be expected to have an understanding of:

- poultry
- cattle
- sheep.

Standard 91297

Title Demonstrate understanding of land use for primary production in New Zealand

Number of Credits 4