

Achievement Standard: Agricultural and Horticultural Science 90160:

Demonstrate knowledge of the impact on the environment of primary production management practices

Resource reference: AgHort Science 1.5A

Resource title: A growing awareness

Credits: 3

Teacher Guidelines

The following guidelines are supplied to enable teachers to carry out valid and consistent assessment using this internal assessment resource.

Teachers need to be very familiar with the outcome being assessed by Achievement Standard Agricultural and Horticultural Science 90160. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing students against it.

Context/setting

Growing agricultural and horticultural products requires the farmer to carry out a number of management practices. Some of these practices can cause harm to the environment, while other management practices can benefit the environment – or at least minimise any negative impact.

In this assessment activity students are asked to produce fact sheets for three management practices that impact on the environment, then compare and contrast two of the management practices.

Prior to beginning this activity, introduce a wide range of management practices (both positive and negative) to students.

Conditions

It is suggested that students have two weeks of in-class and homework time to complete task 1. Adapt the student instructions to meet the needs of your students. You may wish to use a milestone or tracking sheet to monitor student's progress during the tasks.

Task 1 can be easily adapted by asking students to present information using another medium, for example, an oral presentation or a slideshow.

Task 2 is an in-class, open book assessment activity. It is suggested that students have one hour to complete it. Adapt the student instructions to meet the needs of your students.

Provide guidance for students when they are choosing management practices to allow valid comparisons to take place.

Resource requirements

Students will require:

- library and Internet access;
- access to desktop publishing software or art supplies.

Additional information

Guidance on the teaching and learning can be found online in the Agricultural and Horticultural Science Teaching and Learning Guide at <http://seniorsecondary.tki.org.nz/>.

Name: _____

Achievement Standard: Agricultural and Horticultural Science 90160:

Demonstrate knowledge of the impact on the environment of primary production management practices

Resource reference: Agricultural and Horticultural Science 1.5B

Resource title: What are we doing out there on the farm?

Credits: 3

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate knowledge of the impact on the environment of primary production management practices.	Demonstrate detailed knowledge of the impact on the environment of primary production management practices.	Demonstrate comprehensive knowledge of the impact on the environment of primary production management practices.

Student Instructions Sheet

Introduction

Growing agricultural and horticultural products requires the farmer to carry out a number of management practices. Some of these practices can cause harm to the environment, while other management practices can benefit the environment – or at least minimise any negative impact.

This assessment activity is made up of two tasks.

Task One: You will produce fact sheets for three management practices that impact on the environment. This impact could be on one or more aspects of the environment – land/soil, water, air, and/or other living things.

You have two weeks of in-class and homework time to complete task 1.

Task Two: You will choose on aspect of the environment and compare and contrast two the management practices that impact on this aspect.

Task 2 is an in-class assessment activity. You have one hour to complete it.

Due Date: No later than the 18th April (Thursday week 11)

Task 1: Fact sheets

Primary production management practices can have a positive or a negative impact on the environment (**land/soil, water, air, and/or other living things**).

Positive management practices include biological control of pests and diseases, crop rotation, treatment and recycling of effluent, and use of compost material.

Negative management practices include indiscriminate/incorrect fertiliser application, over-cultivation, indiscriminate/incorrect chemical spray use, indiscriminate/incorrect disposal of animal manures, and burning off crop stubble.

Start Here

Choose **three** management practices to research in task 1.

Make sure at least one of the practices has a **positive** impact, and at least one has a **negative** impact.

Each factsheet must be no more than two sides A4.

1. **Describe** the management practice, and explain how it impacts on aspects of the environment – land/soil, water, air, and/or other living things.
Use images as well as text to describe both the management practise and the effect it has on the environment.

These images can be assessed from the internet, local papers, books and photos.

Your **Factsheet** should:

- clearly **identify** the management practices that you have chosen;
- describe the impact of the management practice on **one aspect** of the environment;
- explain why each management practice is considered to have either a **positive** or **negative** impact on **one aspect** of the environment (for example, on the air, soil, water, or living organisms).

Management practise name	Environmental Aspect	Positive or Negative	Used Text	Used Pictures	Described	Explained
1						
2						
3						

Remember at least one must be **Positive or Negative**.

Task 2: Comparing management practices

Choose **TWO** management practices that impact on the **same** aspect of the environment – land/soil, water, air, and/or other living things.

Write a short report that compares and contrasts the positive and/or negative impacts of each management practice.

In your report:

- Identify the key points of difference for each management practice. Describe how these impact on the environment.
- Explain the relative merits of positive management practices, and/or explain the alternative management practices that farmers may choose instead of a negative management practice.