



New Zealand's specialist land-based university



UNIVERSITY OF NEW ZEALAND

## Course Outline - Agriculture in New Zealand

### A short course to accelerate contextual knowledge of the Primary Sector

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#### Course Description

“Agriculture in New Zealand” is intended to provide clients with a detailed overview of New Zealand’s primary industries. After successfully completing the unit, clients should be able to discuss in an informed way with a wide range of stakeholders the issues currently confronting New Zealand’s primary industries. Clients should also be positioned well to make informed selections of further professional development opportunities.

Agri One Ltd is a joint venture between Lincoln and Massey Universities to develop new joint opportunities to work with agri-food businesses. “Agriculture in New Zealand” has been developed by Professor Russ Tillman using material sourced from undergraduate papers offered by both universities.

The course comprises a selection of 5 modules. Each module is equivalent to approximately 10 hours of work. The first two modules in the unit are designed to provide clients with an overview of the contribution of New Zealand’s primary industries to the external and internal economy and the interaction of these industries with the New Zealand landscape.

The remaining modules deal in more detail with three individual sectors of the agricultural/horticultural industry – the dairy, mixed livestock and arable/horticulture sectors.

The modules for “Agriculture in New Zealand” are as follows:

Module 1. Primary industries in the New Zealand economy

Module 2. Primary industries in the New Zealand landscape

Module 3. Dairy industry in New Zealand

Module 4. Mixed livestock industry in New Zealand

Module 5. Arable and horticultural industries in New Zealand

## **Learning Objectives**

Whole Unit: After completing this unit and passing the assessment clients will:

1. Have sufficient awareness of agriculture/horticulture in New Zealand and the issues faced by those involved, to converse intelligently with others in the industry. This concept is termed “conversational agriculture”.
2. Be able to identify other areas of further professional development related to agriculture that will add value to their current and future employment.

Module 1: After completing this module and passing the assessment clients will:

1. Be able to describe the overall contribution of agriculture to New Zealand’s external economy.
2. Be able to describe the relative values of products exported by the various sectors within agriculture and horticulture, the countries to which these products are exported and how these products and destination countries have changed over time.
3. Be able to discuss likely future trends in agricultural and horticultural exports, including changing consumer requirements, competition from other countries and other possible threats.
4. Be able to describe the contribution of agriculture and horticulture to New Zealand’s internal economy. This includes contribution to GDP, number of people employed and how these have changed overtime.
5. Be able to discuss the role of government (both national and local) in the regulation of agriculture in New Zealand.
6. Be able to describe the structures of the major agricultural industries (e.g. the role of co-operatives) and the contributions of the servicing industries.

Module 2: After completing this module and passing the assessment clients will:

1. Be able to outline the major areas of agricultural land, the associated topography, the climate, and the main types of agriculture practised. Be able to discuss in broad terms how the types of agriculture practised in different regions have changed over time.
2. Understand at a high level how the availability of sunlight, water and essential plant nutrients control the growth of perennial pastures.
3. Be able to demonstrate how the climate in different regions of New Zealand affects the seasonal pattern of pasture growth, and then be able to discuss in general terms how these contrasting patterns of pasture growth affect farming operations in these different regions.
4. Be able to discuss how technologies such as irrigation and drainage can overcome some of the natural limitations to agricultural land use.
5. Be able to describe at a high level current issues of environmental concern (e.g. emissions trading scheme and water quality) that are impacting on agriculture in New Zealand.

Module 3: After completing this module and passing the assessment clients will:

1. Be able to describe in general terms the characteristics of dairy farms in New Zealand. This includes the number of farms, the average and range of farm sizes and cow numbers, the average and range of milk solid (MS) production per cow and per hectare, and how all these parameters have changed over time.
2. Be able to describe the ownership structures and employment arrangements on New Zealand dairy farms.
3. Be able to describe the role of processors such as Fonterra and the relationship between these processors and dairy farmers.
4. By using a simple budget model provided on the course be able to demonstrate the financial performance of a model dairy farm in New Zealand and the factors that affect this. Be aware of the changes in profitability that have occurred over the last 20 years.
5. Be able to describe the yearly calendar of activities on dairy farms and how these vary between different types of farm.
6. Be able to describe the major dairy breeds in New Zealand and discuss the differences between them.

Module 4: After completing this module and passing the assessment clients will:

1. Be able to describe in general terms the wide range of mixed livestock farms in New Zealand. This includes the numbers and sizes of farms, the variation in topography between flat land and steep hill country, the different types of animals (with emphasis on sheep, beef and deer) and the contrasts between breeding and finishing operations.
2. Be able to describe the ownership structures and employment arrangements on New Zealand mixed livestock farms.
3. Be able to describe the role of processors such as the meat companies and the relationship between these processors and mixed livestock farmers.
4. By using a simple budget model provided on the course be able to demonstrate the financial performance of a typical hill country sheep and beef farm in New Zealand and the factors that affect this. Be aware of the changes in profitability that have occurred over the last 20 years.
5. Be able to describe the yearly calendar of activities on a typical hill country sheep and beef dairy farm and how this might vary throughout the country depending on climate and topography.
6. Be able to describe the major sheep and beef breeds in New Zealand and discuss the differences between them.

Module 5: After completing this module and passing the assessment clients will:

1. Be able to describe in general terms the characteristics of the horticultural and arable production systems in New Zealand. This includes the range of crops grown, the numbers and sizes of the production units and how these have changed over time.
2. Be able to describe the ownership structures and the wide range of employment arrangements on New Zealand horticultural and arable production systems.
3. Be able to describe the roles of processors and marketing agencies (such as Zespri) and the relationship between these agencies and horticultural and arable producers.
4. By using a simple budget model provided on the course be able to demonstrate the financial performance of a typical horticultural production unit in New Zealand and the factors that affect this. Be aware of the changes in profitability that have occurred over the last 20 years.
5. Be able to describe the yearly calendar of activities on a typical horticultural unit and how this might vary between the major types of crops.

## **Assessment**

Throughout each module there will be a series of small quizzes to challenge group discussion. After the completion of 5 modules clients can elect to complete a formal examination on the content of the whole unit through an assignment to be provided after course.

## **For Credit**

Agri One Ltd will be seeking approval from the Academic Boards of Lincoln and Massey Universities to register "Agriculture in New Zealand" to gain 5 academic credits. In future, upon successful completion of the course assessment, clients can contribute the credits towards an academic qualification at either Massey or Lincoln Universities if the client wishes to undertake further study.

If clients choose not to be examined formally on the whole unit then they will receive a certificate of completion for those modules which they have completed – including the appropriate quizzes and assignments.

## **Price**

Agri One Ltd is offering this course at \$1250 (plus GST) which includes a comprehensive Study Guide, face to face tuition with Prof Russ Tillman, group workshops, assessment and certification, lunches and dinner. Group discounts are available to organisations nominating two or more participants @ \$1000 plus GST.

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