

# EDUCATIONAL COURSES AT CANTERBURY AGRICULTURAL COLLEGE

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## INTRODUCTION:

Over 95 per cent of New Zealand's export income is derived from the products of the primary industries and this income enables us to import the raw materials for most of our secondary industries and the manufactured goods which contribute to our standard of living. Indeed this country with annual exports worth about 250 million pounds and imports worth about 160 million pounds, conducts an external trade at nearly £200 per capita—the highest in the world.

To maintain our present standard of living we must increase our export trade at a rate sufficient to keep pace with our population increase which is estimated to bring the total population to 3 millions by about 1975 and to nearly 4½ millions by the year 2000.

New Zealand lacks the great basic natural resources of coal, metallic ores, salt and brine deposits, petroleum and natural gas upon which modern industrial developments are based. Our great resources are a favourable climate for pastoral farming and an enlightened and conscientious rural population backed by sound research and advisory services. To them must go the credit for our success as a low cost producing and major exporting country of meat, wool and dairy products.

Even though the products from our exotic forests will become increasingly important as contributors to our ex-

port income, it is quite clear, if we are to maintain our present standard of living and meet the needs of our expected population increase, that we must step up agricultural production at the rate of about 2½ per cent. per year. Under present conditions this is equivalent to an annual increase of

50,000 dairy cows

23,000 beef breeding cows and heifers

500,000 breeding ewes

with proportionate increases in the acreage of field and market garden crops.

In the half century 1900-1950 production was nearly quadrupled by doubling the production per animal, nearly doubling the production per acre and by bringing into production nearly two million acres of additional land.

New Zealand can achieve, over the next 25 years, the goal of a 60 per cent. increase in primary production provided that a real national effort is made. Capital expenditure for agricultural development must be given a very high priority, research must be stepped up and generously supported and the National advisory services must be extended and strengthened.

Agriculture and horticulture over the next 25 years will offer many opportunities to young people seeking to serve this country in satisfying and rewarding vocations.

The Agricultural Colleges which are the training ground for many young

people who make agricultural teaching, research and advisory work their vocation or who enter farming have a key role to play in the national programme. Both Colleges have developed and kept up-to-date a series of courses each of which provides special training.

### **COURSES OF INSTRUCTION:**

Canterbury Agricultural College—better known as Lincoln College has a proud 75-year record of service to this country and now offers the following courses:

#### **1. Courses for Degrees in Agriculture And Horticulture**

B.Agr.Sc., B.Agr.Sc. (Hort), M.Agr.Sc., M.Agr.Sc. (Hort).

These courses are available to those who have completed the University Entrance Examination and they provide sound training for students seeking professional appointments as teachers, research officers, field instructors and advisory officers in this country or in the Colonial Service.

The training for the bachelorate degree lasts for four years, the first of which—the Intermediate Year—includes chemistry, physics and zoology and is taken at one of the University Colleges at Auckland, Wellington or Christchurch, or at the University of Otago. The next three years cover the professional subjects which give a sound background in the many facets of soil science, plant science, animal science and economics.

Masterate courses take one or two extra years during which advanced work and research training is provided in a specialised field of study.

It is usual for graduates going into teaching, advisory work or commercial work to take the bachelorate: it is essential for those seeking research positions to take the Masterate.

It is also necessary for degree students to spend the equivalent of one full year in gaining diversified practical experience on farms and this is usually taken over the long vacations between the academic years. Assistance with employment is given to students where required.

Special scholarships, agricultural bursaries and teachers bursaries are

available to students taking the degree courses.

#### **2. Course for the Diploma in Valuation and Farm Management.**

(Dip. V.F.M.)

This course offered only at Lincoln is an advanced and specialised one open only to students who hold a degree or who have passed at a satisfactory standard either in the Diploma of Agriculture or the Intensive Course or who have had training and experience of substantially equivalent value. It is specially planned to provide a sound training in the business aspects of agriculture and is of great value to young men who will be managing farms or who will be seeking positions in the various Government Departments which are concerned with rural activities—Fields Division of Department of Agriculture, Valuation Department, Maori Affairs Department, Lands and Survey Department, Public Trust Office, and State Advances Corporation. Men entering commercial firms and lending institutions or becoming professional valuers should find it particularly useful.

The course is of one year's duration. University graduates in Agricultural Science will receive credit for those subjects which are common to the two courses. Other students will be required to complete a full year's study. Particular attention is devoted to the subject of "Farm Management", which in addition to the subject matter outlined in the same subject for the Degree course will include an intensive course of instruction in farm surveys and valuations, the analysis of farming practices, the planning of farming operations, preparation of budgets, reports, farm management supervision and general advisory and regulatory work in connection with rural production.

#### **3. Course for the Diploma of Agriculture (Dip. C.A.C.)**

This course is designed to produce men and women who have a sound knowledge of the principles and practice of agriculture and who can play an important part in the life of the community.

In general, the course is designed for those intending to take up farming as a career, though it is also very valuable for those desirous of entering

commercial firms or other organisations connected with agriculture.

This course was modified in 1955 and is now divided into two parts, the practical work course and the academic and technical work course.

The practical course consists of:

- (a) Prerequisite training
- (b) Approved practical training over the 7 month period between the two academic sessions.

The prerequisite training may be either satisfactory work during the 12 months' Farm Training year taken wholly at the College or two full years' experience (normally school vacation experience is not counted towards the two years) on one or more private farms. This latter method of qualifying for entry is particularly suited to farmers' sons.

The Farm Training year is specially suitable for students with little or no previous practical experience or with limited experience on one kind of farm as all students receive general instruction and gain experience in the growing and handling of all classes of crops and in the management and handling of all classes of livestock.

All students in the Diploma course must spend the 7-month period between the two academic sessions in gaining further approved practical experience on farms.

The academic and technical course consists of two periods each of about 5½ months and extending over the first two terms of each of two regular teaching years: normally from about March 1st to mid-August in each year—the easiest period of the year as regards the labour position on farms. This section of the course covers lectures in appropriate subjects and technical work on wool, farm machinery, building construction and workshop practice.

A summary of the arrangement of the course is as follows:—

- i Prerequisite practical training:  
Either A. College Farm Training Course 12 months: March—February inclusive or B. A minimum of two years' experience on private farms.
- ii First academic session: March to Mid-August.

iii Further practical training on private farms September—February.

iv Second academic session March to Mid-August.

#### 4. Intensive Course:

This course, taken as the fourth year of a five-year training scheme by rural field cadets in the Public Service is also open to young men with approved practical experience. It does not lead to a Diploma and is not recommended for students seeking a professional position.

The course covers eight months from about March 1st to November 1st, is devoted to lectures, demonstrations, consideration of systems of farm management, farm inspections and technical work, and is designed to give students who have had good practical experience, a sound background of the theory and practice of New Zealand agriculture. It is particularly suited to young men who intend to take up farming, though students who obtain a satisfactory pass in the course are accepted for entry into the Valuation and Farm Management course provided that they have had adequate diversified practical experience.

Students must be at least 20 years of age and must have had two to three years of diversified farming experience.

The subjects covered are very similar to those given in the Diploma Course.

#### 5. Course for the Diploma of Horticulture:

(Dip. Hort C.A.C.)

This course, open to young men and women over 17 years of age, is of two years' duration and is designed to give students a thorough training in all phases of horticulture. Some previous practical experience in horticulture is desirable but not essential.

The course commences early in January each year and the students spend the whole of the first month, part of February and most of November and December on practical work within the College grounds.

During the teaching year, lectures and technical work alternate weekly with practical work. This gives students full opportunities to gain experience in the seasonal work associated with vegetable and fruit growing,

bedding plant displays, landscaping and plant propagation. Lectures cover the full range of subjects normally included in horticultural courses.

#### **6. Woolclassing Course:**

This course of 12 weeks which leads to a Certificate in Woolclassing is designed to give students a good understanding of wool and a thorough grounding in woolclassing. It is specially valuable for those intending to take up sheep farming or who wish to obtain positions in the trade as woolclassers and sorters.

Instruction is carried out in a well-equipped room and a full range of New Zealand wools is available for practical work.

The course is held each year in the middle term and extends from about mid-May to mid-August. Previous experience is desirable but not essential.

Students who complete the course with an average in written and practical work of 70 per cent are given a credit pass and the immediate award of the certificate. Others who pass but fail to reach credit standard are required to complete a full season of approved practical work before the certificate is issued.

This course, established in 1944, is now regarded highly by employers in the wool trade as one offering sound training in professional wool handling.

#### **7. Course in Agricultural Engineering**

The growing importance of engineering in the primary industries, and the increasing application of engineering techniques to the primary production problems has been recognised by the introduction at this College of a full-time course in Agricultural Engineering. The first course will be offered in 1956 and entry into the course will be limited to students with approved qualifications either in engineering or in agriculture. For those with engineering qualification, basic training in agriculture will be provided in the subject Agricultural Science and for those with agricultural qualifications, Engineering Science will be a required subject. Both classes of entrants will take Agricultural Machinery and there will be also a choice of subjects for specialisation.

The College has been approved as a teaching and examining centre for the British National Diploma in Agricultural Engineering (N.D.Agr.E.). Arrangements have been made for candidates to be examined at this College for his internationally recognised qualification.

It is expected that the new course will help to meet the demand for men trained in agricultural engineering for work with farm machinery and agricultural engineering both in New Zealand and abroad.

#### **SHORT COURSES:**

In addition to the regular courses listed, the College offers annually, short courses in a range of subjects. These courses, while much less valuable than those outlined, do provide opportunities for those unable to attend the regular courses to broaden their knowledge of many facets of agriculture and horticulture.

#### **INFORMATION:**

Students who hold the University Entrance or Higher School Certificate are eligible for financial grants from the Education Department, while there are also bursaries and scholarships for which students, with or without these qualifications, may apply.

Information on all these, on qualifications required for admission to the various courses, on the content of the courses, on fees, and on opportunities in agriculture and horticulture are available in the College Calendar which is published annually or on application to:

The Registrar,  
Lincoln College  
Christchurch.

#### **SUMMARY:**

The great challenge to New Zealand over the next twenty-five years is to increase primary production at a rate sufficient to maintain our export trade at levels which ensure a high standard of living for our rapidly increasing population.

Canterbury Agricultural College appreciates the need to train an adequate number of young people in professional and vocational agriculture and offers a wide range of courses for this purpose.

Copies of this Bulletin may be obtained from the Secretary, Canterbury Chamber of Commerce, P.O. Box 187, Christchurch.