Floreat Agricultura

A HISTORY OF AGRICULTURE AND HORTICULTURE AT MASSEY UNIVERSITY

1927 – 2002

LUCY MARSDEN
LESLEY COURTNEY
MICHAEL BARTLEET

Floreat Agricultura

A HISTORY OF AGRICULTURE AND HORTICULTURE AT MASSEY UNIVERSITY

1927 – 2002

LUCY MARSDEN, LESLEY COURTNEY & MICHAEL BARTLEET

ISBN 0-473-08570-4

***Floreat Agricultura* was the motto of Massey Agricultural College. It can be translated as 'Let Agriculture Flourish'.**

The publication of *Floreat Agricultura* has been supported by the C. Alma Baker Trust. The Trustees have been pleased to make this contribution in recognition of their close association with Massey University and as an acknowledgement of the University's 75th Anniversary. The Trust is a registered charity, and this publication grant does not imply endorsement of the views expressed by the authors.

The C. Alma Baker Trust is named for Charles Alma Baker, a New Zealand surveyor who, from the 1890s, invested successfully in tin mining and the development of the rubber industry in the Federated Malay States. In 1926, Baker purchased Limestone Downs, a large sheep and beef property near Port Waikato. Limestone Downs remains the principal asset of the Trust, which applies most of its earnings to the support of research projects and postgraduate scholarships in agricultural research and education. The Trust is based in the United Kingdom and draws on the advice of a 'New Zealand Committee' in the management of Limestone Downs and charitable activities within New Zealand.

Designed and printed by The Printery, Massey University.

This book is dedicated to the memory of Professors Peren and Riddet, who worked so hard to establish Massey Agricultural College, from which Massey University has developed.

CONTENTS:

FOREWORD:

In tracing the history of Massey Agricultural College and Massey Agriculture, this book also identifies the distinguishing characteristic and spirit of Massey University.

As an agricultural college and a university, Massey has always played a leading role in contributing to the well being and growth of the community. This tradition, supported by a culture of excellence, innovation, and relevance, goes back to the University's early days as an agricultural college, established to meet the needs of an agricultural economy. The University has grown since then, diversifying in line with the development of the New Zealand economy and change within society. However the traditions of problem solving and contribution, the hallmarks of Massey Agricultural College, still remain.

The Massey University of today is uniquely equipped to contribute to social, cultural and economic growth. For example, its areas of excellence and expertise embrace the entire range and sequence of New Zealand's core business of agriculture: from farm production, through product development and design, processing technologies, added value and enhancement strategies, to marketing and export strategies.

In achieving success in these and other endeavours, the University owes a debt to the commitment of the men and women who contributed to the early success of Massey Agricultural College. That commitment is apparent today within Massey Agriculture, under the leadership of Stuart Morriss, and throughout the wider University community.

In her Preface, University Archivist Lucy Marsden expresses the hope that, as well as placing on record the story of agricultural education at Massey, this book will help former students relive happy memories. To that I would add that the spirit of this book and the men and women who appear within it define the spirit of Massey University.

— *James A. McWha*
Vice-Chancellor

PREFACE:

Stuart Morriss, Director of Massey Agriculture, originally suggested that a history of the agricultural and horticultural sciences at Massey University be written to commemorate the institution's 75th Anniversary.

Chapters 1 and 2 were written by Lesley Courtney, and Chapter 3 by Michael Bartleet. Both have recently completed their MA in history at Massey. Chapter 4 was written by Lucy Marsden, the University Archivist, who holds an MPhil in history from Massey, and she also edited the work.

The principal source for information was the Massey University Archives, where a small but important collection of administrative records, plans, photographs, publications and oral history tapes has fortunately been preserved.

Our thanks are due to the small committee who oversaw our work, to the referees who read and commented on the manuscript, and to all the staff and former students who helped fill in the gaps between the official records. We must not forget the students of the 1930s and '40s who left a legacy of thoughtful and often highly amusing material in the College magazine *Bleat*. In addition, we are grateful to the Heads of Institutes in Massey's College of Sciences who parted with some of their precious maintenance grants to fund the project, and to the C. Alma Baker Trust which assisted with publication costs.

We trust that as well as placing on record the story of agricultural education at Massey this book will help former students relive happy memories.

Every effort has been made to ensure the accuracy of facts and events documented in this book. Should readers be aware of any errors the authors would be glad to be notified of them.

Lucy Marsden, Lesley Courtney and Michael Bartleet.
May 2002

CHAPTER 1:

FOUNDATION YEARS TO 1939

The multi-campus Massey University of the twenty-first century is a far cry from its origins as a modest agricultural college situated in small-town New Zealand, though from its inception it was envisaged that the College might expand its horizons. 'The Government has...reviewed the possibility of the agricultural college site becoming, in later years, an educational centre devoted not alone to the teaching of science and practice of agriculture.'[1] This was all in the future, however, and for the first three and a half decades agriculture was its raison d'être.

COMING TO FRUITION

Despite the fact that New Zealand's economy traditionally relied on primary products, there was little in the way of agricultural education until the Department of Agriculture was formed in 1892, although Lincoln College had opened in 1880 as a private institution near Christchurch.[2] During the early part of the twentieth century experimental farms, which were largely demonstrational, were then set up.

Massey Agricultural College (MAC) was established as a result of demands from the early twentieth century for an agricultural education centre for the North Island. The north had overtaken the south in population and development and Sir James Wilson, President of the Farmers' Union, and his organisation initiated the push for an agricultural training centre. As Lincoln's teaching related to the sheep farming and cropping of Canterbury, the needs of the North Island and dairying, now so important, were not catered for scientifically or in further education for farmers. New Zealand could not afford to fall behind its competitors, and needed a more scientific approach to maintain its position as an agricultural exporter. There was also talk of a central research institute.

William Massey's Reform ministry of 1912 made agricultural education a priority, and in 1913 the Board of Agriculture Act was passed with the express purpose of investigating the benefits of establishing an agricultural college. Discussion resumed after the First World War as farmers' associations became aware of rising costs, falling prices and declining soil fertility. In addition, the dairy industry was experiencing technical problems, for example with the failure of cheese starters. Increasing state control of distribution and marketing, and the example from overseas of applying science and modern methods to improve productivity and efficiency, renewed the idea of a North Island college and a research and dairy institute. A Chair of Agriculture at one of the universities, to work with experimental farms such as Ruakura, was among the proposals.[3]

The Sir Walter Buchanan bequest of £10,000 established the first Chair of Agriculture at Victoria University College (VUC) in 1924, with Professor Geoffrey S. Peren appointed to the position. As

[1] *Manawatu Daily Times*, April, 1926.
[2] Lincoln was set up under the auspices of Canterbury University College and became Canterbury Agricultural College in 1896.
[3] The Department of Agriculture set up Ruakura in 1901 as the first training school.

Professors Peren and Riddet looked at possible sites for the Agricultural College in 1925/26. They were the forces behind the establishment of the College and its siting at Palmerston North.

Early this year the College was honoured with a visit from the Prime Minister and the students impressed it on him that Massey College was surely an Agricultural Institution. After being stopped at the main gates, Mr Savage was induced to ride in a wheelbarrow over the cattle-stop and then transferred to the farm dray, and conveyed up to the Assembly Hall. After the ceremony he was presented with a little pig as a souvenir of his visit, and he bore it triumphantly from the hall.

(Bleat 1937)

the only member of the department, with no facilities for any practical component, Professor Peren thought it was the most extraordinary school of agriculture ever to accept students. Meanwhile, at Auckland University College (AUC), Professor William Riddet was appointed to the Chair of Agriculture, set up in 1925 with the £20,000 Sir John Logan Campbell bequest. Although both schools were recognised by the University of New Zealand (UNZ), there was mounting support for one properly equipped agricultural institution with equal status to the other university colleges. The Farmers' Union was in favour of amalgamating the bequests to form one government institution. They were also concerned about separate provincial claims to establish colleges at sites such as the Ruakura, Wallaceville, Penrose or Weraroa training farms, which were causing considerable discussion and rivalry.

Professor Peren quickly became critical of the level of agricultural education in New Zealand. He too saw the merit of one 'good' college in a central location, teaching diplomas and degrees of agriculture, that 'would stand through generations as a very fine piece of statesmanship.'[4] However, the Board of Agriculture, although supportive of one school at some stage, was still in favour of farm schools for the time being. Professor Peren, like the Farmers' Union, viewed this as detrimental to agricultural education as it would split the monies available. Support came from the 1925 Royal Commission into University Education, which was of the opinion that the primary industries were too important for scientific agricultural education to be ignored.

Subsequent to the Royal Commission Professor Peren persuaded the Victoria Council to approach AUC officially with the aim of combining the two bequests to form one agricultural institution. Professor Riddet was persuaded and, after

[4] *Dominion*, 17 March 1925.

consultation, the meeting that took place on 2 February 1926 agreed to establish an institution in the Palmerston North-Marton area on land suitable for dairying and sheep, with an animal husbandry emphasis. A joint deputation to the Prime Minister about the proposal gained the necessary approval and promised financial assistance. Simultaneously, the visiting Director of the Department of Scientific and Industrial Research of the United Kingdom, Sir Frank Heath, was reporting on scientific and industrial research in New Zealand. He felt that a dairy research institute was urgently needed since the dairy industry was so important to the New Zealand economy, and he recommended that it be located close to the new agricultural colleges, and directed by one of its professors.

After much debate, the Batchelar property, at Fitzherbert near Palmerston North, was chosen by the two Professors as the preferred site and endorsed by the Government. While close to Palmerston North, a road and rail junction large enough to service the College, it also had varied land character suitable for sheep, dairying, cropping, and experimental work. Further incentives for the Government were the Palmerston North City Council's offer to gift part of the adjacent McHardy estate to the proposed College and that it was the approved site of Auckland and Victoria University Colleges, which, by pooling their endowments, had provided much needed material aid. Although hard fought for in parliament against some opposition, particularly by Canterbury farming interests, the New Zealand Agricultural College Act: An Act to make Further Provision for Higher Education and Research in Agriculture and Applied Science in New Zealand, was passed on 11 September 1926. Lincoln's concern for its own survival eventually resulted in it offering itself as a gift to the country if it was granted equal status with any new college.

The New Zealand Agricultural College Act established the College in connection with the UNZ. Governance was to be by a Council that would manage and superintend administrative affairs, property and appointments, including that of the Principal, and report annually to Parliament.[5] The Professorial Board would control academic matters and handle student admissions and discipline. Finance would come from the Buchanan and Campbell bequests, from an annual maintenance grant of £15,000 from Government, and from subsidies on capital endowments and voluntary contributions.

Alongside Professor Peren, who was instrumental in the establishment of MAC, the support and cooperation of Professor Riddet and both Victoria and Auckland University College Councils were vital. The Prime Minister, Gordon Coates, was also an enthusiastic advocate for a university-level institution, recognising the country's need for scientific farming methods and agricultural research if it was to compete on the world market. The other people most responsible for what was to become MAC were: the Hon. George Fowlds, a former Minister of Education and current Chairman of AUC Council; Professor T.A. Hunter of VUC; the Hon. O.J. Hawken, Minister of Agriculture; Sir James Wilson of the Farmers' Union; and Sir Harry Reichel and Frank Tate for their Report on University Education. Sir Frank Heath, in his report into scientific and industrial research in 1926, had given the final seal of approval that convinced government and parliament.

In 1926 the Department of Scientific and Industrial Research (DSIR) was also formed to organise and administer

[5] The Council was to consist of appointees made by the Governor-General, representatives from Auckland and Victoria University Colleges and a member of the Board of Agriculture.

PROFESSOR GEOFFREY S. PEREN

'Prof' Peren was appointed the first Professor of Agriculture in New Zealand at Victoria University, and subsequently became the first Principal of Massey Agricultural College, 1927–1958.

Born in England, Peren obtained his degree from Ontario Agricultural College. On securing the Chair of Agriculture at Victoria in 1924 he quickly realized the inadequacies of agricultural education in New Zealand and was instrumental in the setting up of Massey. He was the Principal and Professor of Field Husbandry for 30 years. As his teaching role diminished he was largely known for his skills as an administrator and political negotiator. He was a forceful and determined leader of the College, and constantly sought ways to enhance contact with the agricultural industry, broaden the courses on offer, and encourage as wide a range of students as possible. As a man of many talents and vision he took Massey Agricultural College through three decades, laying the foundations of the University that was to come.

He encouraged, and was active in, researching the actual problems faced by the practical farmer, and played a major part in developing the breed of Perendale sheep.

Outside Massey Peren maintained a life-long interest in the armed services. He served with distinction in the First World War. In 1938 he formed a troop of the Manawatu Mounted Rifles at the College, then during the Second World War he commanded first the 2nd Infantry Brigade Group, then the 4th New Zealand Division, with the rank of brigadier.

He was rewarded for his services to New Zealand with a CBE in 1953 and a KBE in 1959. In 1977 Massey awarded him an honorary DSc. He died in 1982.

scientific and industrial research in the Dominion. Following Heath's recommendations, it was decided to set up a dairy research institute in close co-operation with the College, with the Dairy Produce Board contributing to the cost of the research.

With the Batchelar property purchased on 9 December 1926 the College Council came into existence on 20 January 1927, with George Fowlds as Chairman. However, the title New Zealand Agricultural College effectively ignored Lincoln's role.[6] Thus, the Massey Agricultural College Act of 29 July 1927 renamed the new College after the late William Massey, who had been a champion of New Zealand's agricultural interests. The Act also made the College part of Victoria or Auckland University Colleges for the granting of degrees, although it could independently award diplomas, and vested all lands and property in the hands of the College Council. Professors Peren and Riddet were released from their respective University Colleges, and Peren was appointed acting Principal. Advertisements for staff were placed in New Zealand and overseas publications offering rates of pay superior to those for similar positions elsewhere. Among the first appointees in 1927 were Charles Yates as Registrar, W.J. McCulloch, Farm Manager, and G.M. Valentine, Dairy Factory Manager. The rest of the year was spent buying stock and making farm improvements, as far as the budget allowed. In anticipation, the Manawatu Daily Times reported that Palmerston North was 'destined to become the centre of New Zealand's intellectual and material prosperity.'[7]

[6] In late July Lincoln had been granted equal status with the new institution, along with money to update itself and an annual government grant for research.
[7] *Manawatu Daily Times*, 22 July 1926.

A COLLEGE EXISTS: THE FIRST YEARS

Massey Agricultural College opened for students on 2 March 1928. On 20 March the formal opening by the Minister of Agriculture took place, with students, the College Council, heads of various divisions of the Department of Agriculture, and members of the farming community in attendance. Hawken, in promising Government support, prophesied that the College would be of continual future benefit to the country.

The Environment

The Depression was to affect the College's early development, since restricted finances severely curtailed expansion of activities during the first half of the 1930s. The Annual Report of 1933 noted the difficulties of establishing a college with a shrinking income due to the reduced maintenance grant and lower returns from investments and farm produce. Staff were particularly affected. All salaries were cut by ten per cent, and four assistant lecturers and the librarian were made redundant and replaced by lower paid employees. As student numbers continued to rise throughout this period limited staff meant an increased teaching load, and senior lecturers having to teach lower level courses. That the College survived was because of the zeal and enthusiasm of its young, hard-working staff, and because of determination from the top.

Fine tuning higher agricultural education, the School of Agriculture Act was passed in 1937, placing Massey and Lincoln under the single administrative body of the New Zealand School of Agriculture. The College Councils became Boards of Governors responsible to a central Council of four representatives from each College, with an independent chairman. Lincoln and Massey also had one representative each on the Senate of the UNZ. Both Colleges viewed their place in the new School favourably, seeing it as advantageous from both a research and university point of view. By August 1938 the College had gained full university status.

Academic Programmes

From the first there had been talk about turning out too many degree 'men' for the needs of New Zealand, which the Board of Agriculture Commission considered was about a dozen a year. But Professor Peren never intended that the College turn out dozens of degree men and nor did it. It was always known that courses other than degrees would be the bread and butter of the College and were the means to educate the practical farmer in the application of science.

> Apart from the training of a necessarily limited number of graduates in agriculture...the main consideration of the college is to inculcate some of the principles of rationalised farming into the heads of young farmers, to replace the rather haphazard methods that characterise our farming today....the college will be more than justified if it can produce a student fitted for the stringent farming conditions of tomorrow.[8]

The College opened teaching towards the degrees of BAgrSc and MAgrSc of the University of New Zealand, and towards its own certificate courses in dairy farming and herd-testing and a Diploma of Associate in Dairy Manufactures. The dairy farming and manufacturing courses were to be taught in blocks during the winter off-seasons, over two and three years respectively, and

[8] *Manawatu Daily Times*, April, 1926

Dr. C. P. MCMEEKAN

Born in 1908, Campbell McMeekan was a founding student of Massey in 1928. He played a very active role in student life in the formative years, becoming President of the Student Association and helping develop the constitution, known as 'McMeekan's Bible'. He was recognised by Riddet for his academic ability and on becoming a junior lecturer at Massey after graduation he pioneered scientific work in pig growth, nutrition and breeding.

A post-graduate scholarship enabled him to pursue this area of research for his PhD at Cambridge University, with his thesis becoming 'a classic in the study of the pig.' After returning to New Zealand and Massey he secured first the Chair of Animal Husbandry at Lincoln in 1939, and then the Directorship of Ruakura Animal Research Station in 1943. In the 1960s he joined the World Bank as senior agriculturalist, and then retired to farm at Putaruru and work part time for the Bank. McMeekan married twice, first while at Massey, and in later years to one of the first woman graduates of Massey Agricultural College. He died in 1972.

McMeekan was a 'large' man in more ways than one. He was innovative and hard working throughout his life, and an inspirational leader, if not always the most tolerant administrator. Active in both the agricultural and educational worlds, his many articles and booklets were renowned internationally.

We've a botanical lecturer Y_____,
Who might take some care for our sakes,
So nervous it makes one,
As you put the old brakes on,
When coming through Massey College gates.

(Chaff 1935)
Of Dr J. Yeates
Lecturer in Agricultural Botany
1928-1961

the herd-testing course was one of 14 days. Overall, the College offered instruction in 18 subjects from agricultural geology to machine-shop practice.

The four-year BAgrSc, with the first ('intermediate') year taken at other universities, was offered for those who intended taking up agricultural science as a profession, such as research workers, teachers, field instructors and technical experts. Majors in botany, zoology, chemistry, field husbandry, livestock and dairy science were offered. Degree students had to have a year's experience on approved farms, and submit a report on the farm and work, a collection of grasses and weeds and, if dairy science was the major, work in an approved factory. Masters level required a further full-time year.

In 1929 sheep farming and wool classing certificate courses were also offered. Both dairy and sheep farming became one-year courses of seven months in 1931, and the practical component, which had been optional, became compulsory. It was felt that making these full-time rather than block courses would advantage both the College, which was empty for nine months of the year, and the students, who would see a greater range of farm operations, and 'football and student life in general would benefit tremendously'.[9]

In 1933 these courses lengthened to two years, and in 1938 combined into the Diploma of Agriculture with a dairy or sheep option. A poultry department was established and a poultry course offered from 1932, with students starting the one-or two-year course at a time convenient to themselves. It was essentially practical work, as their labour was required to run the department. Students from the Palmerston North Technical School also attended poultry courses in a block. From the first the College Calendar stated that women students were eligible for all

[9] Principal's Report, July 1929, Council Documents, 1.2/1/1, Massey University Archives.

courses but it was envisaged that special courses were needed to attract them. After the Sarah Anne Rhodes Fellow in Home Science was transferred from VUC, Massey introduced a three-week Home-makers' Course in Domestic Science which it was hoped to extend to one year and even to a School of Domestic Science. Intended 'to provide well educated helpmates for the future farmers of New Zealand', the course ran from 1939–41, covering 'science' in the home.[10]

The diploma and short courses were important in that they helped ground the College's work in the realities of everyday farming and reached the current and future practical farmers. Dairy manufacturing courses were always the most popular, with up to 40 in a class.

The Farm

The first *Calendar* described the college farm as

> some 865 acres...about two-thirds being heavy clay and the remainder river flats which vary from loam to light sandy loam and gravel....the stock being carried at present consists of purebred and grade Jersey and Friesian dairy cattle, Aberdeen Angus bullocks, Romney and Southdown sheep, and Berkshire and Tamworth pigs. The crops being raised represent the range of forage and root crops normal to the North Island.[11]

While the Batchelar land was not fully developed or equipped by opening day, a good start had been made. The farm was augmented by the 200-acre Pahiatua block, leased from 1928. The dairy factory, designed by architect Roy Lippincott, was a priority for the College and the DRI. Built in 1928, it was described as a 'commodious structure' and contained the latest machinery on a small, pilot, scale.

On April 30th, 1931, the science block was officially opened by the Governor- General, Lord Bledisloe, and the occasion gave the student body an excellent opportunity to provide a rag. The G.G. and his party were met at the Refectory where they had lunched and a guard of honour consisting of students suitably adorned and mounted on the farm draughts did honour to them. They were then conveyed in "Amy" who was reinforced by the "Caterpillar" tractor to the front of the main building where Lord Bledisloe had conferred upon him the Most Distinguished Order of the Bleat. A student of piggish associations produced a Royal Show Champion Yorkshire Boar ribbon to adorn the person of Sir George Fowlds. An extra over-size key was given the Governor-General and after much manipulation he was able to fit it into the lock of appropriate proportions and declare the building open to the students.

(Bleat 1933)

I. The Sheep Farmers' Chanty
II. The Cow-cockies Croon

(Air: "The Froth-blowers' Anthem.)

I. SHEEP-FARMERS' CHANTY.

Altho' we're fond of wool, we're not the least bit woolly;
We're educated and sophisticated fully;
Not for us the early frosts and dejecting weather,
We've put our trust in lamb, and ram, and ewe and wether!
The heavier the wether, the wether, the wether,
The heavier the wether the happier we'll be!
We'll feed them on junket
Or other things Plunket,
The heavier the wether the happier we'll be!

II. THE COW-COCKIES' CROON.

At peep of day before the sun is fully yet,
We bestride the fields in search of cows to get;
And we dream as o'er the dewy grass our way we take
Of culling by Babcock and the test we hope to make!
The more, the more our cows give, our cows give, our cows give,
The more, the more our cows give, the happier we'll be!
We've complete reliance
In this modern Science;
The more, the more our cows give, the happier we'll be!

[10] *Dominion*, 1 May 1931.
[11] Massey Agricultural College *Calendar*, 1928, p.13.

Research during this period must be admired given the inadequate research conditions and the personal time spent. Some of the research laid the foundation for on-going programmes.

MAJOR RESEARCH PROGRAMMES TO 1939

- Dairy research at No. 2 Dairy Unit, including work on the plane of nutrition, and the effect of different pasture crops on milk flavour
- Pig breeding
- Hairiness in wool
- Testing for hairs in wool: created the benzol test, leading to the Fleece Testing Service, from 1934 research continued by collecting data on samples tested
- Artificial insemination. Infertility in rams
- Creating a hardy breed of sheep for hill country conditions
- Search for high yielding strains of NZ flax: produced some but abandoned due to lack of outside interest
- Farm shelter
- Root development of pasture and crop species: found dogstail most suited to NZ conditions
- Mole drainage: demonstrated that proper drainage increases production
- Egg laying competition to improve efficiency and quality of egg production: introduced a form of quality control of eggs

Research results were printed in College bulletins and scientific periodicals, and reported to the Research Committee.

The farm was vital for its teaching and research role, and McCulloch was supported by a carpenter, shepherd, ploughman, carter and three hands, and a tractor and teams for cultivation. Potential students were also employed during the summer of 1927–28 to assist in preparatory work. By 1930 the farm was said to have 'modern' poultry plant and dairy farm buildings and an 'up-to-date' woolshed and yards.[12]

Progress on the farm was slow over the Depression years since the limited funds available were needed for development of the campus, but overall there was steady improvement in the quality of the farm and stock. Expansion was greatly assisted by donations of stud animals, and manufacturers of agricultural equipment were keen to gain advertising advantages by donating plant. During the academic year most of the farm labour and work on the grounds was done by students, and some use was also made of unemployed men as labourers. Students employed for their practical components over the summer were paid enough to cover their board.

The college farm was divided into separate dairy and sheep units in 1929. Until the Second World War they were broadly overseen by Professors Riddet and Peren, but under them were a chief shepherd and dairyman, a farms manager and general labourers. These positions varied slightly over the years. In 1929 J.H. Kissling was appointed poultryman, to develop the poultry department, and McCulloch resigned as farm manager, to be replaced by sheep farm and dairy farm managers. W.R.R. Hewitt became sheep farm manager in the late 1930s, and was to work there for some 30 years. A farm committee was formed in 1931 to inspect the farms periodically, liaise with Professors Peren and Riddet over management, and report to Council. The Council encouraged the units to pay their own way from the beginning. The poultry department was

[12] This woolshed is still standing, although unused, across the road from the present Massey University campus.

self-sufficient financially, and the sale of stock, wool and milk supplemented the other departments. Post-Depression the annual maintenance grant was returned to its former level and then increased in 1938, which allowed for the purchase of additional stock and some urgently needed farm buildings, including cottages, bridges and sheds.

In 1935 the College bought the remaining 60 acres of the Batchelar farm, bringing the total owned to 925 acres. Three years later the rundown Tuapaka property near Aokautere was leased, adding a further 200 acres of flat and 850 acres of hills, which provided an important opportunity to demonstrate the worth of Massey techniques on hill country.

Research

In the early years Massey was primarily an educational institution and research was a secondary consideration. Establishment and development costs absorbed most of the College's income, leaving little to fund research, and, during the Depression especially, academic staff had to concentrate on teaching. It was not until the late 1930s that more junior lecturers allowed senior staff an expanded research programme. However, it was always considered that the College would advance scientific knowledge. The proximity of the DRI, whose function was to undertake all research work connected with the production, manufacture and utilization of dairy products, was an advantage, and dairy research was often a joint effort. Professor Riddet proved skilled at obtaining research funding, largely through setting up co-operative ventures with other organisations.

Supplementary research funding was sought from such places as the Empire Marketing Board, the Meat Board and the Flaxmillers' Association. Individuals, breeder associations and firms contributed to relevant research, and senior and post-graduate students assisted with and augmented the research done. George Fowlds, as Chairman of the College Council, wrote in 1932 to the National Expenditure Committee stressing the need for a specific amount to be set aside for agricultural research. He wrote again in 1933 to the Minister of Agriculture complaining that curtailing research often meant the loss of valuable men and knowledge. In this period concern was also expressed for a better organised research programme to ensure efficient and economical results from the money spent and no overlap with other agricultural institutes. In 1937 animal and plant research bureaux were set up, incorporating Massey, Lincoln, Wallaceville and the Cawthron Institute under a single administrative body. The aim was to increase efficiency of research by cooordinating programmes, but in practice this was not achieved as the four institutions rarely agreed.

Extension Activities

It was never initially envisaged that Massey would teach by correspondence, although a group of farmers from Dargaville, in 1932, wondered if 'a postal course in all branches of agriculture should be given for as reasonable a charge as possible.'[13] While the idea was dismissed as impractical, it did lead directly to a monthly bulletin published in newspapers across New Zealand. Little did the College know that it would one day be well known for its large extramural programme.

However, as one of its prime aims was to disseminate up-to-date information, the College always gave priority to

[13] Principal's Supplementary Report, January 1932, Documents of Council, 1.2/1/1, Massey University Archives.

An early tractor, 1928.

> Eve has come to our Eden....It is a sign of our times. Mere woman is sick of domesticity and of playing second fiddle to mere man. The doctrine of the inequality of the sexes has long since gone by the board and now in a world where physical qualification is secondary consideration our masculine rights are being slowly but surely violated. Commerce and the professions have long since succumbed to the machinations of the weaker vessel. Now agriculture is threatened.
>
> *(Bleat, 1932)*

Shearing in the old woolshed, 16 July 1929.

reaching the grassroots farmers and establishing links with outside groups. Selling farm products, entering stock in Agricultural and Pastoral shows, and giving demonstrations all gave Massey a profile outside academic circles. One long-standing and renowned event was the egg-laying contest, held annually from the early 1930s. This meant a lot of work for the poultry staff but reports of progress and results were recorded in the newspapers and read avidly by interested parties.

Media coverage of events, news and articles was very good. The staff were expected to publish work, mainly in the form of articles in newspapers, agricultural journals and magazines, such as the *Dairy Exporter, New Zealand Journal of Agriculture, New Zealand Farm and Home,* and in overseas periodicals. Material was also sent to relevant associations to disseminate amongst their members.

Staff were encouraged to respond to all enquiries and meet requests for lectures and discussions with outside groups, although the Depression temporarily curtailed much of this contact. Generally, visits were limited to the lower part of the North Island. Staff were also frequently involved with local societies and on committees of relevant farming groups, often specifically representing the College. During the 1930s, despite the financial stringencies of the time, sabbatical leave was applied for and frequently granted, often coinciding with overseas conferences. Professor Peren was the first to represent the College overseas with a trip to Australia in 1931, visiting places that had a bearing on Massey's work, with the aim of making contacts for his staff. Overall, he found there was a great deal of interest in the College and its work and that people were surprised at the organisation of New Zealand research as a whole.

Visitors of any sort were always welcome at the College, a list of whom was included in each of the monthly reports. They ranged from governmental dignitaries, and overseas counterparts, to local farmers and school boys. Regular gatherings of farming groups were actively encouraged. Sheep farmers began to meet annually in 1931 and were always the largest such group. Professor Riddet formed the Dairy Science Association in 1929, introduced the Dairy Factory Managers' Week in 1931 and the Dairy Farmers' Conference in 1938, all of which met annually at Massey. Other groups, such as poultrymen, beekeepers and the Grasslands Association, held annual meetings in this period. Short courses also brought in large numbers. By 1939 short, one-off courses were offered in production, treatment and distribution of milk for city supply, dairy and sheep farming, and refresher courses for teachers.

Buildings

While neither the farm nor the teaching facilities were fully developed, the bare essentials were ready for the 1928 opening. The 1928 *Calendar* noted that until permanent buildings could be erected classes would be held in the former Batchelar homestead and a temporary annex.

It was the McHardy property of 'Tiritea', situated on a rise above the Batchelar farm, that was deemed a more fitting site for the development of a campus. It contained 21 acres, 20 of which were natural bush, and a large house, which was cut in two to form the Principal's residence and a temporary teaching building. After 'making do' for a year, a conference was held in February 1929 to discuss the erection of a main science building, designed by Lippincott. The contract was then let in September to Fletcher Construction Company for a total cost of £96,500, to

The 'Old Hostel' came into use in 1931, providing much needed on-site accommodation. Here students relax on a Sunday morning in 1933.

> My accommodation was a lecture room and a study in the Main Science block, and behind the study was a little room which was a so-called private lab. which held a bench, a table and a sink in it. I started from scratch....They fitted up a large room, it was a wool room, ...with benches, apparatus and it was quite a functional lab. And I had two assistants.
>
> (Wally Webster, veterinary lecturer, 1935–1958

The dining hall of the Refectory, designed by Roy Lippincott. Dining at the Refectory was a formal affair and certain standards of dress and behaviour were expected.

include lighting and heating. A refectory was also approved for a cost of £9,500, to contain a dining hall, resident students' games room and common room, changing rooms, kitchen and servants' quarters. It was anticipated that dormitories would adjoin the Refectory. The foundation stone of the Main Building was laid by Sir Charles Fergusson, the Governor-General, on 4 December 1929. The Refectory was completed first and was initially used for lecture rooms until the Main Building became available. It was felt that progress on the buildings had an uplifting effect on both staff and students and gave a greater sense of reality and substance to the institution.

The Main Building was ready for use at the beginning of the 1931 academic year. It contained lecture rooms, teaching and research laboratories, a library, assembly hall, staff studies, a student common room, and housed the DRI. The costs of furnishing the building were borne by the Department of Agriculture. Miss E. Baillie was appointed as the first librarian, and books that were previously scattered all over the College took a week to install in their new home on the second floor. Laboratories and studies were occupied and set up. The Main Building was officially opened 30 April 1931 by Lord Bledisloe, who was then the Governor-General. He applauded the College's development, finding it fully justified by the scope of its curriculum and the number of students it had attracted who wanted to acquire a scientific knowledge of agriculture. With the Main Building occupied, other buildings were released for use, and the adjacent part of the McHardy home became the administration block, as intended. While it took many years to furnish fully and utilise, due to the Depression, the Main Building was a concrete symbol of Massey's intention to be a full University College, not just a farm school.

Massey was always meant to be a residential college, but initially accommodation for the students had to be found in Palmerston North. A bus ran to the town bridge and bicycles were a common mode of transport, but students were agitating for on-site accommodation by 1929. It was felt that the lack deterred some students. With the completion of the Main Building the temporary laboratories could be moved next to the Refectory to become the first student dormitories, and, as the 'Old Hostel', remained in use for many years to come.[14] A matron, cook and two maids were then appointed. The first dormitory and the Refectory were furnished and opened for term one, 1931, with 20 students in residence. In its first year the hostel made a loss of £1.14s.6d per student. A second dormitory was ready for the beginning of 1932, and 1933 saw the hostel accommodation expanded with 35 'study-bedrooms' built with a Public Trust loan. Seventy-five men were accommodated in 1934, but the growing roll meant the demand was never satisfied. Women students just exacerbated the problem. By 1935 the Batchelar homestead was being used as a women's hostel but as it held a maximum of ten beds this severely limited the potential numbers of women students. By 1939 the College was 'in dire need' of hostel accommodation, as students were generally required to live-in. To ease the shortage, degree men were allowed to board in town, since having already been to another university they could be expected to 'behave properly'. However, the College did not want to be responsible for 'farming students' living in town and thought their parents would also object.

Student Life

The opening roll of 85 students, including nine enrolled for degrees, rose to over

[14] Part of the Old Hostel was demolished in the 1980s to make way for the Business Studies building, but part is still in use as staff offices in 2002.

200 by 1930. With some fluctuations during the Depression, enrolments reached a record 383 in 1938.[15] By then over 1300 students had started a course at Massey, 99 of whom had taken, or were taking, a degree course. Students for degrees had to have matriculation and others were required to be at least 16 years of age, raised to 17 in the 1930s.

Scholarships and bursaries funded degree students but there was initially no Government assistance for diploma and certificate courses. However, there were some private scholarships, and in 1931 the College gave assistance to some students whose families had been affected by the Napier earthquake. In 1938 two national bursaries were made available for diploma students: ordinary bursaries for those with Higher Leaving Certificate, and boarding bursaries awarded on merit.

When the dairy and sheep courses became full-time, life on campus became busier. Professor Peren remarked in 1933 that 'the large number of men now in attendance during the winter has transformed the college of the earlier days from a comparatively small family affair into an institution with sufficient population and activities to provide a well developed "life" of its own.'[16] Various clubs of the College held dances, initially in 'town', and 'smoke concerts'. In 1931 arrangements were made for a canteen, which became a successful fund-raising tool. *Bleat*, the annual Student Association magazine, was first published in 1931. It contained an eclectic mix of writing and in its first issue contained a plea for acceptance by the general public. 'Give our college a chance to make good, we have the spirit here – we just need the sustained encouragement'. In 1934 *Chaff* began as a fortnightly student magazine, although its presence fluctuated through the years.

The procession headed by Mr Harper's Baby Austin realistically decorated to represent the College Ram, accompanied by many weird tunes and noises, slowly moved through the main shopping centre of the town. The vantage points along all the thoroughfares were lined with spectators, who apparently appreciated the excellent burlesquing of personalities and historical events....A "magnificent success" aptly describes the first Capping Procession to be held by the College - and it is hoped that the Procession will become an annual event of increasing dimensions.

(Bleat 1935)

The swimming pool, initiated by the Student Association and built with student labour, was opened 1935. 'Great credit is due to the students who worked so willingly in their construction, and we owe a debt of gratitude to the townspeople and Staff members who by their voluntary contributions of cash and material made the construction possible; also to Mr Dawe and Mr Henry Hoskings, for their untiring efforts in assisting in the construction. The cost to date has been in the vicinity of £225, of which £120 was donated by townspeople, and Staff, £25 by the Marion Church Fund, and the remainder by the Students' Association.'

(Bleat 1934)

[15] Figures for enrolments included all students taught on campus in a particular year, whether their course was for a day or years. This figure was not overtaken until 1945.

[16] Annual Report 31 December 1933, Documents of Council, 1.2/1/1, Massey UniversityArchives.

Formed in 1928, the Students' Association was at the centre of extra-curricular activities. Wine (red) and saxe-blue were chosen as the colours by the Principal after the rejection of blue and gold, which were too close to Otago's colours. In 1929 the Association fielded two rugby teams, the College providing a rugby field on land leased from neighbour Mrs Russell of Wharerata. As it was felt important to have as close a relationship as possible with the other Colleges, the first of what was to become an annual match against Lincoln College took place. Soon cricket, hockey, tramping and athletics clubs were formed and 'Blues' were inaugurated in 1934. Staff were involved in both playing and coaching. Other clubs, such as the Student Christian Movement and Debating Clubs, were active. 'In the interest of science the wild men organised the Kareti Club to investigate the velocity at which beer can flow over mucous membranes.'[17] This club was purely social, and staff members such as 'The Undertaker' McLinden and 'Owing' Williams were particularly mentioned for their involvement in its affairs. Later, specific clubs for resident, degree, dairy and sheep farming diploma students were formed. A major achievement of the Students' Association was the building of the swimming pool, opened in 1935. In the same year the Association was recognised as a member of the New Zealand University Students' Association, and gained the right to enter the national university sports tournament.

Capping was first held in the hall of the Main Building immediately after its opening ceremony in 1931, and again annually until 1938, when it moved to the Opera House. They were far from dignified affairs but student antics were received in good spirit on ceremonial occasions. Pranks were frequently played on students, staff and dignitaries alike, as when a pig was released as C.P. McMeekan received his degree. Capping week including the ceremony, revue, ball and past students' dinner soon developed. The first College revue was staged in 1932 with 'All proceeds in aid of better beer movement.'[18] Initially with agricultural themes, revues were expanded when they moved to the Opera House in Palmerston North and were opened to the public. The annual ball, with Mrs Peren and Mrs Riddet as hostesses, was held from 1928, although in 1938 a measles epidemic forced cancellation. 'Procesh' first took to the streets of Palmerston North in 1935, and the tradition of collecting for charity was initiated.

It was felt that women students would round out life at Massey, and Professor Peren was particularly encouraging of them for their 'civilising' influence on the campus. In 1932 Enid Christian, officially the first woman student, arrived in January to do a poultry farming course, but was closely followed, at the beginning of the academic year, by Elizabeth Richards for sheep farming and Katrine Hursthouse to do her MSc. In 1938 Elsie Thorpe, later Paddy Bassett, was the first woman to take a BAgrSc. In this period only four women graduated from diploma or degree courses, although most years there were usually one or two women poultry students. While women students were treated with respect, the College was very much a masculine environment and gender was an issue. Elizabeth Richards got the feeling that 'Some didn't like me being there. Didn't like me beating them.'[19] She went on to win the Sir James Wilson medal for most deserving sheep farming student in her year. The three-week course in domestic science brought far more women onto the campus, albeit at a time when the rest of the students were away for the summer.

[17] *Bleat*, 1931, p.4.
[18] *Bleat* 1932, p.5.
[19] Courtney, Lesley, 'A Feminine Enrolment: Recovering Women Students of Massey Agricultural College 1932-63', BA (Hons) Research Exercise in History, Massey University, 2000.

The College was given, and expected to take, a parental role. The Annual Report of 1931 remarked on the 'fine esprit de corps that exists'. This was no doubt greatly assisted by living on campus. It was expected that 'every student...show both within and without the College such respect for order, morality and the rights of others, and such sense of personal honour as is demanded of gentlemen and good citizens', and students had to sign a solemn promise to obey the regulations.[20] Although the Principal was given strong powers by the Massey College Act, extreme problems were few and far between.

The Old Students' Association held its first Old Boys' Reunion in 1931. It proved popular and obviously a strong tie was maintained with the College, shown by an almost 25% membership of ex-graduates and diplomates in 1938. Contact was made through their own section in the annual magazine *Bleat*.

Massey alumni made their mark in many ways. A survey of 34 'degree men' in 1936 found that the majority was employed in further overseas study, teaching, government departments or at Massey itself.[21] Most of those who took diploma courses moved into or returned to farming. Their exposure to a scientific approach meant many continued to be lifelong learners in agriculture. A student commented in 1932 'You may come back forty years later and say to yourself "I helped to make the name of Massey mean something more than a stately pile of bricks set among nature's grandeur".'[22] Some notable students of this era who did just that were C.P. McMeekan, Mac Cooper and Alan Stewart.

Staff

Massey began 1928 with a teaching and research staff of 14, 17 if DRI staff were counted. By 1932 subjects were grouped

Dr. PADDY BASSETT (NEE THORPE)

Paddy Thorpe was the first woman to graduate BAgrSc from Massey University and New Zealand.

Born Elsie Thorpe, Paddy enrolled for intermediate studies at Canterbury in 1936–37, then decided to change to agriculture. She entered Massey when Lincoln College did not accept women. In 1938 she was the first and only degree woman student and participated fully in all areas of Massey life, being particularly active in the tramping and degree students' clubs. During her vacations she assisted sheep husbandry lecturer Ted Clarke in his research.

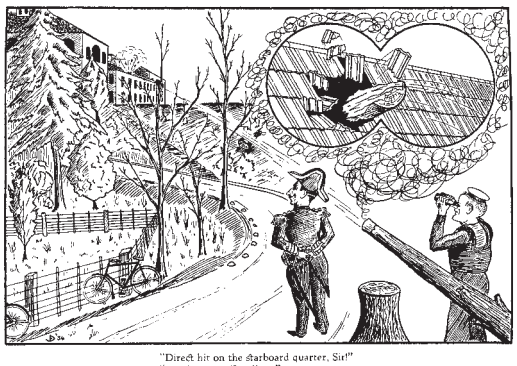
Since graduating in 1941, and obtaining her MAgrSc at Lincoln, her life has been one of research, particularly centred around connective tissue changes. She worked for both the Department of Agriculture and Ruakura Animal Research Station as a research officer before obtaining her PhD from Cambridge University in 1954. After returning to New Zealand she become Senior Research Officer in the Medical Research Council Endocrinology Unit at Otago Medical School and later in the Anatomy Department. In latter years she has continued her work as an honorary research fellow of first Nelson Hospital Board and then Wellington School of Medicine.

I know the vet started a lecture on something, a sexual thing I think it was, I don't remember what exactly and then he suddenly stopped and went onto something else without saying anything and then asked me afterwards did I mind. I didn't mind.

(First woman agriculture student, 1932)

[20] Massey Agricultural College *Calendar* 1928, p.12.
[21] Letter to W. Lee Martin, Minister of Agriculture, 6 Jan 1936, Documents of Council, 1.2/1/1, Massey University Archives.
[22] *Bleat*, 1932, p.2.

The Massey dairy herd goes to be milked, 1931. One of the old Batchelar buildings is in the background.



"Direct hit on the starboard quarter, Sir!"
"Excellent! Excellent!"

(Bleat 1936)

A tropical cyclone hit the North Island in February 1936 and uprooted many trees on the campus, some of which blocked the drive. Explosives were used to shift the blockages, at first without success. Professor Peren encouraged the workers to increase the amount of explosive used, and one chunk of wood then went right through the roof of the Main Building.

into sheep and wool, dairy, economics, bacteriology and mycology, field husbandry and botany, chemistry, zoology, veterinary science and poultry. During this period these 'departments' varied in size from one lecturer of economics to six in dairying subjects.

The College was run very much by teamwork, due in no small part to Professor Peren's leadership. The Professorial Board, made up of senior lecturers and the farm and dairy factory managers, had a good relationship with the Council and also gave advice on larger policy matters. Professor Peren, holding the Walter Buchanan Chair, specialised in sheep husbandry and, as Principal, handled administration and political negotiations, as well as overseeing matters of course content. Professor Riddet, in the John Logan Campbell Chair, was initially appointed as Professor of Animal Husbandry and Dairying[23] and Director of the DRI, and he oversaw most of the scientific research. By 1941 his title was Professor of Dairying. Their teaching activities gradually reduced as administrative responsibilities increased.

Massey attracted a number of notable figures onto its staff, some of whom stayed for many years. While there was some criticism of the amount of 'imported talent', the College was looking to establish a reputation for the quality of its teaching and research. They were to teach 'applied science', although pure science had its place too. Among notable 1928 appointees were Dr F.W. Dry and Dr J.S. Yeates, who spent all their remaining careers at Massey, and the only women lecturer for this period, Agnes Crawford, assistant lecturer in dairying and skilled in 'fancy cheesemaking'. Lectures were also given by invitation on specialist subjects by employees of the DRI and others. There was recognition that increasing diploma and certificate courses meant more 'comparatively elementary work' for the lecturers.[24] Because of the

[23] Professor Riddet is also listed in the early College *Calendars* as Dean of Animal Husbandry.
[24] Principal's Supplementary Report, Sept 1931, Documents of Council, 1.2/1/1, Massey University Archives.

size of the institution, and a very generous staff:student ratio, staff and students had a close relationship that would be unknown nowadays.

The importance of the support staff must not be forgotten in the establishment of the College. There was no large clerical staff until after the Second World War, so the roles of Charlie Yates, Registrar for 31 years, and Ellice Bennett, the first male clerk, who was employed from 1928–72, cannot go unmentioned. In 1937 F.A. Sandall was appointed as the first full-time librarian. While W.J. McCulloch remained only a short time he played a large part in developing the farm over the first two years. Other notable farm staff included Ernie Gould who is remembered for teaching students practical skills, and 'General' Dawe who among other things helped supervise the construction of the swimming baths. Note should also be made of the hardworking and co-operative College Council, under the leadership of George Fowlds until his death in 1934.

By 1939 Massey was seen to be a well-established, if small and specialised, institution of higher learning. It had settled into a reasonably amicable relationship with Lincoln, its sister in the School of Agriculture, and it was looking forward to a new and prosperous decade. However after a record year of enrolments in 1938 numbers were considerably down in 1939. The Second World War was already having an impact.

— *Lesley Courtney*

Prescription for a Scotch Veterinarian:
1 Check tweed suit
1 Bow tie
1 Button-hole (rose)
1 Pair large black boots.

Arrange the above in suitable order around a medium body and superimpose one bald cranium, one large smile, one pair of rotatory orbs.

The above description of the presiding deity of Room B6 is incomplete as it has omitted that intelligence which enables its owner to read the insides of beasties like an open book - particularly during lectures.

(Bleat 1931)
of J. M. McLinden
Lecturer in Veterinary Pathology and Animal Physiology

CHAPTER 2:

WAR AND REHABILITATION 1939–1959

2

The Environment

The most significant event that impacted on Massey during this period was the Second World War. Staff and students were called up to serve, student numbers dropped drastically in the early 1940s, research centred around production of agricultural goods, and ex-servicemen's rehabilitation courses began. The army came to Massey as early as 1938 when Professor Peren formed a troop of the territorial Manawatu Mounted Rifles among the staff and students of the College. In 1941 a Staff College was established in the grounds, and military uniforms and training became a common sight on campus, as everywhere else. There was even an armoury set up in the basement of the Main Building.

With limited enrolments due to the War, the New Zealand School of Agriculture decided, in 1942, to set up a Special Committee to report on the future role of agricultural colleges in New Zealand. The final report recommended that since teaching was the School's primary function it should be associated with the Department of Education, not Agriculture. It also reinforced the need for it to remain free of political interference and retain its university status, and stressed the importance of research in keeping teaching alive and up to date. The committee's main proposals centred on broadening and restructuring courses and expanding extension work.

By 1944 enrolments were increasing again and courses for ex-servicemen were putting a strain on staff, accommodation and finances. R.A. Candy, Board Chairman, commented: 'It is clear that the College has come to the point where either its scope is enlarged or it will not be possible to meet the greatly increased demand for agricultural instruction which has developed today.'[1] Generally, the feeling at Massey towards the end of the War was one of optimism. A bright future was anticipated with plans to attract a wider range of students and diversify further within the agricultural sector. The College was no longer seeking to prove itself but had by now established a firm base from which to progress, to meet the demands of a changing society and economy. It would need to be innovative and extend beyond the boundaries of agricultural science, as some had envisioned in the early years, if it were to survive. As an indication of the changing times and the development of Massey, the annual maintenance grant rose from £17,000 in 1943 to £125,037 in 1958.

Outside forces also played a part in the direction that Massey was moving in during this period. Massey and Lincoln, although combined as the New Zealand School of Agriculture, were separately attached to Victoria and Canterbury as special schools. When in 1946 the UNZ put forward the idea of decentralisation, the two Colleges voted to develop separately from each other. In 1951 the School of Agriculture Act was repealed and assets divided equally between the two Colleges. The original New Zealand and Massey Agricultural College Acts of 1926 and 1927 were also repealed and replaced by the Massey Agricultural

[1] Annual Report of Massey Agricultural College 1944, Documents of Council, 1.2/1/1, Massey University Archives.

College Act of 1952. Massey became a college in connection with the UNZ, responsible to the Department of Education, and again governed by its own Council.

In 1958 the four University Colleges were given degree-awarding powers, and the agricultural colleges were told to approach the Senate separately to determine their future roles. Massey chose to remain connected with the UNZ until becoming a full university in its own right. In the same year Victoria University accepted a 25-acre site for a university branch in Hokowhitu, Palmerston North, rejecting the site that Massey offered, on the former Bourke land adjacent to the College. However, neither side was adverse to the idea that eventually they would merge.

Changes to Academic Programmes

By 1942 limited enrolments meant wool classing and dairy manufacturing courses were not offered. In that year's Annual Report Professor Peren stated: 'In view of the unavoidable demands made in the manpower of the College for the defence of the country, the further development of the institution has been virtually at a standstill. [However] before long...teaching will be increased once more by the demands of the Rehabilitation Committee and the Army Education Scheme.'[2]

During the War Massey developed courses for discharged servicemen and women in conjunction with military advisors. Many men took up short courses of 11 or 28 weeks or entered mainstream agricultural courses from 1944 onwards, although the anticipated ex-servicewomen never materialised. Most of the special courses were just shortened versions of what were already on offer, adapted to the needs of ex-servicemen.

PROFESSOR WILLIAM RIDDET

William Riddet was Vice-Principal and a founding staff member of Massey Agricultural College.

Riddet was born and educated in Scotland. He excelled academically, gaining honours in both the National Diploma in Agriculture and the National Diploma in Dairying before graduating BSc (Agric) from Glasgow. After service in the First World War he was involved in extension and education work in Scotland, then appointed to the Chair of Agriculture at Auckland University College in 1925. Once in New Zealand he saw the value of pursuing a single agricultural college of merit and joined forces with Peren to help establish Massey. In 1927 he was appointed Director of the Dairy Research Institute, a position he held alongside that of Professor of Dairying until his death in 1958. This ensured close co-operation between the College and the DRI in the field of dairying, and his was a major influence on the academic policy of the College.

Described as 'the founder of dairy science in New Zealand', Riddet is remembered for his untiring work over 30 years for the College and the DRI. He was one of the few in his era who had scientific knowledge and understanding of both milk production on the farm, and milk processing in the factory. Among other things, he pioneered the use of the electric fence, and was known for his endless supply of new ideas in seeking answers to problems. He founded the Dairy Science Association, Dairy Factory Managers' Week and the Dairy Farmers' Conference in the 1930s. He was awarded the Gold Medal of the British Society of Dairy Technology and made a CBE in 1954. He died in 1958.

[2] Annual Report of Massey Agricultural College 1942, Documents of Council, 1.2/1/1, Massey University Archives.

Professor William Riddet.

Horticulture, introduced in 1944, brought women in more noticeable numbers to Massey Agricultural College.

It was the post-war period that saw a restructuring and proliferation of courses. Dairy manufacturing split into separate courses, with butter, cheese or market milk options, and a one-year certificate course for milk technicians was developed. However, Professor Riddet provided figures that showed diploma courses were frequently not followed through to completion. Statistics for sheep, dairy and dairy manufacturing courses showed less than half of those entering actually received their diplomas. Subsequently the dairy farming course, in 1945, and then the sheep farming course, in 1954, were reduced to two terms a year and the practical work required cut to one Christmas vacation. The wool classing course had higher completion rates, and in 1946 became a diploma course.

The 1942 Special Committee recommended the introduction of a horticulture course and this was established in 1944 as a two-year full-time diploma course, starting each November.[3] This fulfilled a dream of Professor Peren, a keen horticulturalist, and the practical work allowed much greater development of the grounds. It was intended to, and did, bring women in noticeable numbers on campus. It was developed to meet the requirements of both a career in horticulture and 'gardening at home', and allowed for specialisation in either flowers and nursery work or commercial fruit or vegetables. In 1957 the course was reduced from four to three terms a year, starting in January, in line with other diploma courses. Peren recognised horticulture as a bridge between the country and town. 'I am more than ever impressed with the fact that horticulture provides a bond of interest between ourselves and a large section of the urban population of the country with whom previously we had nothing in common. This is very important because, quite apart from horticulture, 50 percent of our students taking sheep farming and

[3] In 1944 horticulture was offered as a certificate course, but by 1945 it became a diploma.

dairy farming are drawn from the cities.'[4] To cater further for urban students interested in agriculture, a cadet farming course was offered from 1941, where youths would pay for work experience on the College farm as a precursor to study.

The Homemakers' Course in Domestic Science ran until 1941, but went into abeyance due to lack of numbers. A plan to offer it as a one-year course after the War never eventuated because of insufficient accommodation for women students and because the anticipated demand from ex-servicewomen never occurred. However, during the war, herd-testing, a popular short course until its demise in 1949, became dominated by women. Two courses were run per year during 1940 and 1941 specially for women, to meet national manpower shortages.

Short courses were seen as a means to reach the active farming community with limited time, but Professor Peren suggested in 1948 that the College should move away from these by not seeking to develop new ones and only providing those strongly requested. A variety of courses like farm drainage and machinery courses, and short courses for Young Farmers' Clubs were developed to meet demand, as one-off or for two or three years. In the 1950s the most popular short courses were in seeds and fertilizers and floral decoration. The College was not, however, against short courses being run at Massey by outside groups. The College of Retailers, and Departments of Health and Education ran courses, and the New Zealand Wool Board provided shearing instruction.

In 1949 BAgrSc (Hort) and PhDs were offered for the first time and the dairy science degree option, BAgrSc (Dairy Tech), was restructured and spread over five years of two terms. In 1958 Massey could at last offer the first (intermediate) science year, the absence of which Professor Peren had long considered a stumbling block to degree enrolments. Masters were now offered in horticulture and dairy technology.

By the end of this period there was an increasing emphasis on degree students and their needs. A concern had been expressed that diploma courses could jeopardise the standard of courses and take up too much accommodation and staff time. Professor Peren had 'the feeling we are entering a new era' and wondered if in ten years time diploma courses might be given away. 'I have a feeling that we should be thinking along these lines.'[5] It was decided that two-year diploma courses would be reduced to one year of three terms and be limited to 30 students each. It was felt that this would 'cushion the complete exclusion of non-degree courses if desirable by 1963.'[6]

Changes to Academic Structures

In 1943 a Research and Education Committee was set up at Massey to deal with matters referred to it by the Board. On its recommendation the Board of Governors approved the establishment of Chairs in Dairy, Sheep, and Field Husbandry, which were filled between 1947 and 1951. By 1949 Professor Riddet had the title of Vice-Principal. By 1950 the College had also received approval from the Senate of the UNZ for Chairs of Chemistry and Applied Biology, subjects previously not taught at Massey, but they did not eventuate in this period. Heads of Departments were established in 1949 at the instigation of the staff, who emphasised that their request for these titles was a matter of status not salary. New departments were created as the College required them or as a

[4] Principal's Report, February 1944, Documents of Council, 1.2/1/1, Massey University Archives.
[5] Principal's Report, 29 July 1957, Documents of Council, 1.2/1/1, Massey University Archives.
[6] Resource and Education Committee Report 4 Aug 1958, Documents of Council, 1.2/1/1, Massey University Archives.

OUTCOMES OF RESEARCH FOR THIS PERIOD WERE:

- The Drysdale sheep breed. While investigating 'hairiness' in wool, Dr Dry undertook a genetic analysis based on the progeny of one ram (known as Pa Nielsen after his original owner), which had a very coarse and hairy fleece. He was able to show that this extreme hairiness was controlled by a single genetic factor (the N gene). This gene produced many of the characteristics required for specialty carpet wool. In the 1960s a British carpet manufacturer joined with Massey and a group of farmers to found a Carpet Wool Development Company to control the development and marketing of the wool. The breed was named the Drysdale in the 1960s to honour Dry.
- The Perendale sheep breed. Peren identified the need for a sheep breed that would be more productive on hill country than the Romney. The leasing of Tuapaka gave the opportunity to prove that a Cheviot x Romney gave greater returns than a pure-bred Romney. Inbreeding the cross led to the establishment of the Perendale breed.
- Improved production and quality of wool by selective breeding techniques and improved quality control.
- Farm Drainage Advisory Service. Improved equipment for drainage research resulted in the service set up in 1944.
- Yeates' work on farm shelter lead to a bulletin, in 1942, and stimulated further research.
- A wide range of innovations in dairying, including artificial breeding of dairy cows, pioneering use of the herringbone milking shed, co-operative work with the DSIR and DRI on dairy cow nutrition, mastitis control with antibiotics, hormonal treatment of dairy cows, calf feeding experiments, and water consumption studies.
- Establishment of the identical twin herd for experimental purposes.
- Studies of intensive farming practices on a special 30-acre farmlet.

department grew. Wool split from Sheep Husbandry to become a separate department in 1955, and in 1958 Agricultural Engineering became the Physics and Engineering Department.

Changes to the Farm

Between 1946 and 1951 the College farm acreage grew with the purchase of three properties:

- the Bourke property of 220 acres immediately adjacent to the Main Building
- Tuapaka, near Aokautere, bought after being leased for many years
- Rata, a hill country property in Southern Hawke's Bay.

During this period and the next, 1959–1980, Massey's development is closely connected with that of land acquisition, for the campus as well as the farms. For example the acquisition of the Bourke land in 1946 enabled the campus and farm areas to expand to the south-east, and further land acquisitions in the 1970s took this expansion to the Old West Road. There was also a continuing need for new farmland to replace land taken for building and other projects, such as when the government transferred some of the good quality Batchelar land to the DSIR.

The College farms comprised 3,970 acres by the end of this period. Besides Tuapaka and Rata, the College sheep and dairy farms, small areas around the College were used for poultry, pigs, horticulture and field husbandry demonstrations, including an orchard. The quality of the land varied from the 'good' sheep farm to the 'very poor' Rata land. The farms, used for teaching and research purposes, needed to pay their own way. The sheep farm did this the most profitably, with the added funds allowing it the greatest research opportunities. The

dairy unit was never as commercially viable; it was hoped that the newly acquired Bourke land could be developed into a dairy research farm on the income generated from dairy products, but this did not eventuate until the late 1950s.

Change and Continuity in Research

In the early years research was largely overseas knowledge applied to New Zealand, but now a broader base allowed more specialised research, specific to New Zealand. Post-war Massey was able to step up its research programme with a full staff, increased grants, better equipment and improved techniques. Although much of the funding for research came from the DSIR, Professor Peren was critical of the Research Council's allocation of funds for major projects, which seemed to go to DSIR institutions. He felt it was a waste of his staff's talents not to be able to access larger amounts of money. Other sources also provided funding, with the UNZ contributing to biochemistry, economics, soil chemistry and animal husbandry, and the National Pig Council funding a research piggery, which opened in 1954.

A meeting between the New Zealand School of Agriculture and the National Research Council in 1944 adopted the proposal that future research institutes should be built in close proximity to the Agricultural Colleges. It was hoped this would provide closer co-ordination between the two parties. In 1950 the Plant Chemistry Laboratory of the Plant Research Bureau was sited near Massey. The DRI, previously attached to the DSIR, became incorporated in 1947, with full control given to its own board.

Prof. did not believe in having people there that didn't do it. He didn't employ a lot of people. He had beautiful grounds and they sold a lot of produce. And it was the students did the work. And in a way it was sensible. I think we enjoyed it and you learnt because you did it.

(Horticulture student, 1940s)

PROFESSOR M. M. (MAC) COOPER

'Mac' Cooper was very active at Massey as both a student and lecturer. He graduated BAgrSc in 1934 and on becoming the first agricultural Rhodes Scholar continued on to Oxford University. On his return he lectured at Massey until 1947. Cooper followed a path very similar to McMeekan and continued his work on pigs. His strong sporting ability won him a NZU Blue for rugby and he played against the 1935 All Blacks for both Scotland and Oxford. He was appointed to the Chair of Agriculture at Wye College, University of London, and then became Dean of the Agricultural Faculty and Pro-Chancellor of the University of Newcastle.

Cooper has been described as 'challenging, controversial and inspirational', and his talents were recognised when he was awarded a CBE for services to British agriculture, then an Honorary DSc from Massey in 1972.

"PEREN'S LIGHT HORSE"

The above title expresses the usual Student familiarity to the latest development at the College, i.e. the newly-formed squadron of the Manawatu Mounted Rifles Regiment (Mechanised). The Squadron was formed largely through the enthusiastic co-operation of Professor Peren and Maurice Webster. Mr Webster holds the rank of Captain in the Veterinary Corps attached to the Q.A.M.R. Regiment. In the last war Professor Peren held a commission as a Staff Lieutenant in the Artillery, and thus has qualifications which should be of value in his present position of Squadron O.C.....

With the threat of war ringing in their ears, the students and the staffs of the College, the Dairy Research Institute and the Grasslands Division, rose to the occasion by enlisting and establishing the Squadron on a firm basis. The first parade was called for August 16th, and was a conspicuous success. Captain Peren addressed the men, thanked them for their loyal support and said that he hoped all would work enthusiastically to make the "show" a success. Since then parades have been held every Wednesday from 1.30 p.m. to 3 p.m.

(The Grunt, January 1940)

The campus as it was in 1941. The land to the right of the picture was to remain Russell property for another 10 years, although some was leased to the College.

Change and Continuity in Extension Work

The Sheep Farmers' Annual Meetings had remained the most successful in attracting contact with the agricultural industry. In 1959 demand meant the Meeting had to be held at the Opera House. Over the years the annual Dairy Farmers' Meetings were also well attended. In 1949 the Wool Association began to hold their annual meetings at the College, and others followed suit. The College also instigated Farmers' Weeks, for both sheep and dairy farmers, and ran field days at the college farms, open to all. In 1957 a Secondary Schools' Week was developed, attracting 142 boys in the first year, a number that grew annually.

The 1942 Special Committee criticised the College for not doing enough extension work. It was thought the College should play a wider role in rural life and should be more freely accessible to farmers; the Committee suggested a range of means to disseminate information. They also strongly recommended the appointment of full- time staff to co-ordinate the work. Peren ideally thought that men should be appointed to each department and be responsible for a programme of special lectures, thus eliminating short courses. While this never occurred, in 1944 a full-time 'Literary Officer', Mr L.A.G. Barrett, was appointed to publicize the College. He assisted in the preparation of articles for publishing and in dealing with visitors and farmers' meetings, and his job steadily grew. In the 1950s a part-time staff member was employed as Public Relations Officer to help Barrett. A series of books for the army rehabilitation scheme, published in 1944–45, were the first real attempt to record the scientific knowledge of New Zealand agriculture. From 1948 onwards Barrett also assisted with the publication of the *Dairy* and *Sheep Farming Annuals*. These books recorded current work and staff research. The numbers of published

articles, extramural lectures and demonstrations grew from the 1940s.

Changes to Buildings

Hostel accommodation had proved to be a continuing problem as Massey grew. Professor Peren constantly battled to have more hostels built, particularly of a permanent nature. The 'Old Hostel', moved next to the Refectory in the early 1930s, was still serving as the only dedicated student accommodation available, apart from the Batchelar homestead for women. Even the top floor of the Registry building was used to house some students. It was the War that directly contributed to new hostels being acquired.

The army brought prefabricated huts with them, which proved inadequate for their purposes, so approval was granted for the erection of a permanent staff hostel that was built in 1941 and handed over to the College in 1944 for use as a hostel. It was originally known as the 'Pink Hostel', later as McHardy Hall, and became the first purpose-built accommodation at Massey. The army also took over the running of the Refectory for the duration of its stay, with the College paying per student for them to cater for Massey's needs. Army huts from Linton also served to create a hostel for returned servicemen in 1947, becoming known as 'Rehab'.

The course in horticulture made new accommodation for women essential. In 1944 a bequest from Mrs M. Moginie of Auckland was used to buy the Monro property, across the road from Wharerata. It was able to accommodate up to 26 women, with three army huts adjacent. This was all the accommodation available for women throughout this period. It was never sufficient for demand and this meant women were turned away and course development for women students limited.

The Staff College was built by the army and, on being turned over to Massey in 1944, became known as the 'Pink Hostel', because of its colour.

On the 10th of April last a farewell function was held for Professor Riddet who, following a period of ill health, has retired from the College after 31 years of service. Prof. Bill, as we all know was, with Prof. Peren, one of the old originals of the College and it is to these two men that Massey owes a debt of gratitude which we will never be able to repay.... Prof. Bill...was looking pale and a little drawn when he first arrived, but amazed us all by speaking for almost an hour. Any words of mine would be quite inadequate to describe this speech which was given in the true Prof. Bill style – his Scots brogue, clear and incisive manner of speaking, his apt and nimble turns of phrase, all combined to make this speech one which all those who were present will never forget. Prof. Bill...went on to describe the early formative days of the College and told of the days in which his and Prof. Peren's singleness of purpose had combined to make the College what it is today.

At the conclusion of his speech, Prof. Bill went on to look at the future of the College and the aims and ideals which he has visualised from the first, which will no doubt come to fruition in the not so distant future. Much of the sadness of the occasion was dulled by Prof. Bill's magnificent personality and the feeling of pride to be associated with a character such as Prof. Riddet and an institution such as Massey.

(Massey Agricultural College Old Student Association Newsletter, May 1958)

PROCESH

The Capping Committee this year has planned for a Procession which will surpass in every way even the last year's very creditable effort. With the provision of extra funds it is hoped that the floats put in by the different faculties will be more extravagant both in numbers and design. Procesh is dependent in construction and presentation wholly on the initiative and enthusiasm of every student. It must be remembered that the humour displayed on the placards must be above a certain low level so as not to offend the good taste of the citizens across the river, who, if aroused, would mar the success of our Revue.

(Chaff, April 1954)

CAPPING WEEK

This is a week of varied activity and celebration culminating in the capping of graduates and presentation of diplomas. Years hence when you have forgotten all that you ever knew about Lactobacilli and Inelastic Supply Curves there will be one feature of Massey that you will always recall – Capping Week and all the fun it entailed. Those unfortunate enough to have had to endure a year at one of the metropolitan university colleges will no doubt be able to remember a slight lessening of the grind which passes for capping week in these institutions. Whereas at the other colleges the majority take little interest in the proceedings, at Massey, because of our small numbers, everybody is in boots and all.

(Chaff, February 1955)

The last accommodation facility for this period was added to the campus in 1953 when the Young Farmers' Club Memorial Dormitory Building was realised. The building and furnishing of this hostel, designed by Massey's lecturer in agricultural engineering A.A.D. McGregor, was entirely funded by the Club as a memorial to its members killed in the war, at a cost of £13,000. It could accommodate 32 men and was erected to house members who were attending short courses, but could be used by the College when not in demand. Extended dining facilities were required to cope with the added accommodation. Later in the 1950s the College was advertising accommodation for 300 men and 20 women. Boarding fees stood at approximately £3.10s, slightly less for women because they cleaned their own rooms.[7] The Old Hostel remained in use and was renovated in 1959.

The Main Building provided essentially the only lecture accommodation, however, and as the College expanded every room was needed. In 1947 the anticipated extension to the top floor was completed. The future intention was to erect separate buildings for different departments, but meantime army huts were in use everywhere, for accommodation, lecture and changing rooms. The College applied for funding for their building requirements but the War, and then an intensified Government post-war building programme, meant that the College would have to wait for major building projects on campus. However, a new building for wool classing was provided in 1941, and in 1956 a large wool room was completed with help from the Wool Board. The farm received its share of agricultural buildings and cottages and a new research milking shed and dairy cow-feeding barn were added in 1956. A separate DRI building was viewed as essential, and plans for a new library were drawn up in 1956, but these and most of the 'Master Site Plans' were not realized during this time.

[7] Fees were £114.6s for men and £110.17s.3d for women per annum.

In 1951 another long-held dream of Professor Peren's was achieved when, after Mrs Russell died, the College acquired Wharerata for £15,000. The large homestead was surrounded by 16 acres of gardens and stood between Moginie House and Massey. It was subsequently used to house the Horticulture, Sheep Husbandry and Economics Departments and the gardens were used for teaching horticulture. In 1954 the College Council erected the Bernard Chambers Veterinary Clinic on Wharerata grounds. Funded from a bequest and government grant it also included the Veterinary Pathology and Animal Physiology Department, with laboratories, operating theatres, x-ray facilities and a veterinary museum.

The Students' Association also provided some facilities. A small sports pavilion was completed in 1956. The students themselves began the building but, unlike the swimming pool, it had to be completed by outsiders when it dragged on too long. The canteen, part of the common room in the Main Building, was also extended with student funds, and a sub-committee of the Standing Committee of Council was appointed to look into funding for a Students' Union Building in the same year, and began the process of raising funds.

Student Life

Due to the War enrolments dropped to an all time low of 48 in 1942, only 12 of whom were full-time, but they rose again in 1943 to 141. Advertising was felt to pay off when, for an expenditure of £250, enrolments were up 147 percent to 363 in 1944. Enrolments of degree students continued to rise, while ex-servicemen's and then diploma students' numbers dropped. By 1959 degree students comprised over 40 percent of all total enrolments.

Our Haughty-Cultural Girls

Now, some of our Horties are sporti,
While a few of them merely are horti.
But the boys all agree,
When they're out on the spree,
That all of the Horties are norti.

(Masskerade, 1947)

Capping ceremony held its usual odd moments of hilarity, including the spilling of chaff on the official dais, the loosing of live fowl, and the usual interjections, but the guest speaker, Mr Oram, Speaker of the House of Representatives, was generally unmoved, had a ready reply to interjections, besides which he delivered an excellent address.

(Massey Agricultural College Old Students' Association Newsletter, 1950s)

REVUE

Revue is staged for the education and delight of the citizens of Palmerston North and its environs. Preparations for the show begin in the first week of term and culminate in the dress rehearsal. The rehearsals for Revue take time but you can't claim to be a true Massey student unless you play a part, however small, in the production of the year. Remember, there is a place for almost any talent no matter how unusual or ordinary, in the revue cast. An added attraction is of course the Revue Cast Party which follows the final night.

(Chaff, February 1955)

DAME ELLA CAMPBELL

Dame Ella Campbell had a career at Massey spanning 55 years. Born in Dunedin she obtained an MA and DSc from Otago University. After lecturing at both Victoria and Otago, she found her way to Massey Agricultural College, remaining from 1945 to 1975 to lecture in botany, which was newly in demand due to the introduction of the horticulture course. Employed during the War when very few men were around, she was for many years, the only woman on the academic staff. Campbell recalls the 'much more relaxed atmosphere' of MAC. As 'one big family' the staff and students were involved in the same social activities – dances, trips and sport – and she was particularly involved starting and coaching women's hockey. During her time at Massey Campbell saw botany evolve from being subsidiary to horticulture to become a subject in its own right. Besides teaching she built up a world-renowned reputation for her research into bryophytes.

On retirement Campbell did not stop but turned up daily to research in her office in the Ecology building. It was not until 2001 that she relocated her specimen collection to her home, where she has continued to work. With an international reputation as an expert on orchids and liverworts, she has produced over 100 scientific papers during her career. She was awarded a Massey Medal in 1992, and made a Dame Companion of the New Zealand Order of Merit in 1997.

The original library was situated on the top floor of the Main Building.

During the War many agricultural degree students sought to join up despite being exempted military service. Sadly a new entry became part of the Principal's reports as each month a record was made of former students captured, missing or killed. Although potential students were exempted their compulsory 14-week military service until completion of their agricultural course, after the War the College suggested that such students complete military service before entry.

Although it was still a very masculine institution, women were more evident in full-time courses. They were also noticeable on the sports field with women's hockey and basketball teams, and Massey was able to form a ski team for the first time. Their numbers were still minimal, however, since only six women entered for a degree course during this period, and the ceiling of 26 at Moginie House limited enrolments. Generally the relationship between the sexes was 'like siblings' but romances naturally flourished and engagements were announced. Possible recipients of the 'Calf Love Shield' were keenly reported on in Chaff from the late 1940s, and generally received in good humour. While male students were officially banned from 'Mog. House' and grounds, it was the scene of many parties, pranks and uninvited guests. Just as women became more evident on campus during the War, ex-servicemen were also noticeable, particularly from 1944. They were distinguishable by being older and were paid an allowance, which made them appear well off compared with the average student. Many lived off campus and often they had access to vehicles.

In 1940 two students from Kenya enrolled at Massey and this would prove to be the beginning of a small, but regular, number from that country. From this time on a steady supply of overseas students were welcomed at the College. Indian students first appeared in 1947 and the number grew following Professor Riddet's visit to India

in 1953 to study that country's milk production problems. Professor Peren commented in 1952: 'It would seem that the reputation of the College in countries overseas continues to grow, as a result of which the international character of the student body, which it was thought at one time might be only a post-war flash in the pan, is being maintained.'[8] Many of the Asian students attending Massey in the 1950s were funded by the Colombo Plan. In 1955 a Fulbright Fellow attended Massey for the first time. Sixty-one students came from 19 countries in 1956, the greatest numbers taking diplomas and master-level courses. By the late 1950s Australians accounted for more than a third of the total number of overseas students.

In 1941 the College colours were changed from wine and saxe-blue to Cambridge-blue, light navy and silver. Many of the clubs went into recess during the War and a smaller Student Executive held office. An ex-servicemen's club briefly flourished but was destined to be short lived. Student life recovered towards the end of the War, most notably with increased sporting competitions. *Chaff* reported that all students should experience at least one tournament. During this time Massey participated as a college in the Winter Tournament and those of 'a good standard' could be assured of a place in Victoria's teams for the Easter Tournament. Debating teams also won the Joynt Scroll and Bledisloe Medal throughout this time, in competition with the other universities. Dances remained a popular form of leisure activity, usually arranged by the various clubs as fund-raisers. In 1949 the Principal was given the discretion to allow alcohol at formal functions if he wished. Procesh and the revue had been suspended during the War but in 1945, with increased numbers, it was felt time to reinstate them. The Student Association's *Chaff* and *Masskerade* magazines reflected some forms of student life. *Chaff* was strong on sport, covered recent college activities, and usually contained an article on a relevant outside issue. *Masskerade* was purely a capping magazine, with the programme of events surrounded by pages of jokes. Drinking and later women were common themes in this magazine, becoming steadily more explicit as the period progressed. *Bleat* continued in its original form until 1959 and the Old Students' Association issued their own magazine *Grunt*, in 1940, which then reverted to a newsletter.

All students were required to live in, if accommodation was available, but later in this period it was the degree students who got first claim on the College hostels. The College still expected to play a parental role in caring for students, particularly the young and female. A supervised study period in the evenings was instituted in 1947, and it was compulsory for all diploma students under 18 years of age. Post Office and BNZ facilities were offered on campus and the Students' Association provided a canteen shop and washing machines for each hostel.

Bicycles were still encouraged as a means of transport. The bus service, introduced during the War, served the campus four times a day during the week, but hardly catered for the weekend with one return bus on a Friday evening. Taxis were expensive but could be justified if as many as possible piled in. Student car numbers were on the rise later in this period, although they were not encouraged or allowed without a warrant of fitness, but motor cycles were banned from campus in 1956. Due to the increased amount of traffic the College petitioned the City Council for a speed limit of 30 m.p.h. from the top of Monro Hill to the bridge, without success.

[8] Annual Report of Massey Agricultural College 1952, Documents of Council, 1.2/1/1, Massey University Archives.

It was the most beautiful place, as Massey was in those days. The big old stone building there in the middle of all those trees....I think we were lucky to be there in those years when it wasn't overridden with students and motor cars.

(Student, 1940s)

During the War diploma students were able to hold agricultural bursaries if they had gained Higher Leaving Certificate, partly in a bid to encourage more students at this stage. However, only degree students were able to apply for a 'student loan' free of interest, a service created by the College from a bequest. Science and post-primary teacher bursaries could also be applied for and after the war scholarships were introduced for the children of disabled or deceased servicemen.

With larger numbers, the relationship between staff and students was more formal than previously. Professor Peren wondered if the fact that many staff were growing older, and others were preoccupied with young children, contributed to declining social interaction. In 1959 Dr Alan Stewart, the new Principal, instituted a system whereby each student was assigned a senior lecturer as their 'mentor' to encourage closer contact between the staff and students. Diploma students were assigned as a class.

The relationship with the residents of Palmerston North had always been a tenuous one. Some students felt they were regarded with suspicion. With an increasingly residential campus, most town/gown contact was limited to capping time. Overall the behaviour of the students in town was fairly innocuous but in 1959 some students caused more problems. Dr Stewart upheld complaints against *Masskerade*, and the majority of students were also offended when some first-year 'dips' decorated the war memorial in the Square. The College fined the students in question and the student body also censured them.

THE FLOOD

During the course of the Animal Production Meeting the recent record Manawatu flood swept the DRI farm and the accretion area of the Dairy Farm. The previous day the Tiritea had flooded and wrecked the bridge at the College gates. As a result of the Manawatu flood (21 ft 3 ins) Massey was isolated from Palmerston North for almost 24 hours. Society members were forced willy nilly to spend a night between the hostel blankets. There were no student pranks, perhaps due to the fact that many students were giving a hand filling sand bags at points down the river. Stock losses at Massey are believed to be about half a dozen hens.

(Massey Agricultural College Old Students' Association Newsletter, 13 February 1953)

Staff

During the war some of the staff were called up for military service, with seven in uniform in 1942. However, as the troubles passed, 39 lecturers were on site in 1946, including Ella Campbell, the second woman lecturer to date. Several past students returned as lecturers, and two of the three new chairs were filled by former students: Dr Ian Campbell as Professor of Dairy Husbandry in 1948 and Dr A.L. Rae to the Chair of Sheep Husbandry in 1951. Both these men had gained their PhDs in the United States and brought to Massey both a more scientific approach to animal husbandry and knowledge of the latest overseas innovations. This trend continued into the 1960s and 1970s as more former students returned to teach following overseas study. A.W. Hudson was in 1950 promoted to another new chair, in Soil and Field Husbandry, and long-standing staff members, Dr C.R. Barnicoat, Dr F.W. Dry and J.H. Tetley, also a past student, became associate professors. Honorary lectureships were also bestowed on the staff of the DRI and other organisations, in recognition of the work done for Massey.

More women were employed during the war, filling positions left by enlisted men. In 1941 there were 42 in total at the College, DRI and Grasslands Division. By the end of the War non-academic staff increased in clerical, technical, labouring and domestic positions. A library assistant was appointed in 1944 and an accountant became part of the permanent staff by 1946. With the resignation of Mr Arthur Morton in 1944, the last remaining original Council member was gone. He had served from 1927 to 1944, with four years as Chairman of the Board from 1938 to 1942.

By the end of the 1950s the only original faces left on campus were Dr Yeates, Charlie Yates and W.A. Jacques. Dr Barnicoat and Wally Webster, appointed in the 1930s, left,

CARCASE QUALITY AND WOOL QUALITY

Not "nearer the bone the sweeter the meat," but "the more hairy the wool the tougher the meat," is probably the inspiration of Mr E. Clarke's explorations into masses of guts, horns and muscle during the past year. When he has finished comparing Dr Dry's extremely hairy P.N. type sheep with normal good wool Romneys, he should provide the answer to the oft asked question: "Has the quality of the wool anything to do with the quality of the meat?" At present it doesn't look as though it has, and despite the blow to pride, many prominent New Zealand breeders may have to eat their words on the subject. Whatever the final answer may be, it is not improbable that the labours of certain enthusiasts in search of truth may inspire them to butchery as a lifetime occupation.

(C.P.McM., The Grunt, Jan. 1940)

Professor Peren – He was probably the right man in the right place. He was a wonderful salesman. And there's no doubt that Massey would never have been what it became if it hadn't been for him because he seemed to know how to sell the College to the government and to anybody else....I don't think that you would call it talking to him. He talked to you and that would have been that.'

(Agriculture student, 1940s)

THE DRIVE

Within the last twelve months great changes have taken place on the road up to the College. The road has been banked at the curves and resurfaced with bitumen. It is now a veritable speedway except for the 15 m.p.h. speed limit and the sheep. The Principal and Mr Dawe had a mutual brainwave and caused the fences to be removed and another cattlestop installed at the foot of the hill. Hence the park-like effect and the unrestricted grazing of contented sheep. The effect is pleasing, but is spoilt in dry weather by the stained road surface.

On the right, just around the bend, there is now quite a group of buildings in the trees. The wool classing room has been there some two years or so, but now nearing completion is a veterinary operating theatre for Mr Webster, a machinery demonstration room for Mr Jacques, a large engineering shop for Mr Dawe, and a stock demonstration room for the sheep farm.

These were all badly needed, and will be appreciated by the students early next year. Thus is Massey keeping up its appearance and improving its facilities.

(The Grunt, January 1940)

and leadership at the top also changed: Professor Peren retired at the end of 1958 and Professor Riddet, ill for much of that year, was forced to retire and died in December.

Massey was now without the two men who had played such a large part in the founding and development of the College throughout its first three decades. What they had achieved prepared the way for the next Principal, former student and lecturer Dr Alan Stewart, to take Massey into a completely new era as an independent institution, soon to be transformed into a full university.

— *Lesley Courtney*

CHAPTER 3

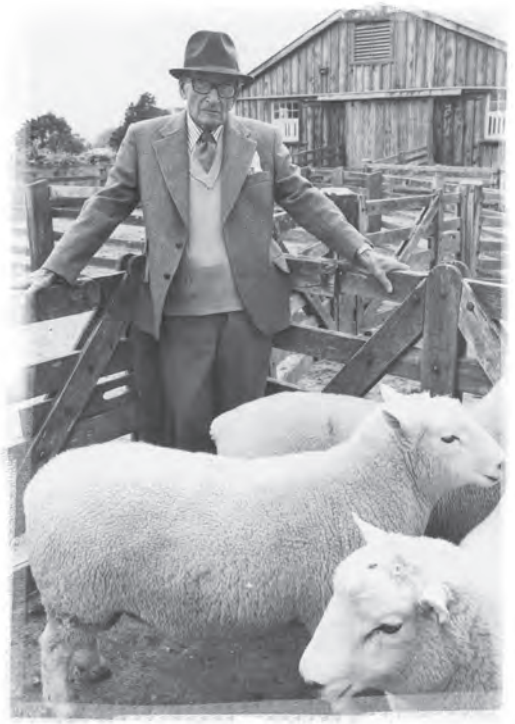
A FOUNDATION FOR GROWTH 1959-1980

Developments from Agriculture

In 1959 Dr Alan Stewart arrived at Massey as the Principal of a single-faculty agricultural college. He later recalled that the 1950s had been lean years at Massey, with student numbers remaining low. It was not until the end of the decade that the Government and the public began to realise that tertiary education had an important role to play in the country's future. The Parry Report on university education (1959) was adopted by the Government, and following its recommendations the University Grants Committee (UGC) was established, and the constituent colleges of the UNZ gained autonomy in 1961. Funding became available for buildings and student numbers began to rise. By 1965 Massey was an autonomous, multi-faculty university. Many of the developments that paved the way for Massey's expansion into a university were closely associated with agriculture.

In 1958 Massey introduced first year science teaching in chemistry, botany, zoology and physics. Previously agricultural degree students had been required to complete the first year of their course at one of the four University Colleges. The availability of science teaching meant that students could complete their entire degree at Massey, and this contributed to the fact that by 1961 there were 242 undergraduates at Massey, a six-fold increase in the number of degree students in just four years. At the time of his retirement Sir Geoffrey Peren drew attention to the need to provide training in food technology. He said that Massey's experience in dairy technology and its interest in meat, fruit and eggs meant that it was well prepared to develop such a course. In August 1959 Dr Stewart pointed out that Massey had offered a course in dairy technology for a number of years and that a 'Food Technology course was considered a natural and desirable extension of this course in view of the increasing amount of food processing now being undertaken in fields other than dairying'.[1] Massey intended to broaden the dairy technology option into a food technology degree, and Dr Stewart told the UGC that the new course would be more attractive to prospective students and employers than the dairy technology option had been. When a proposal was submitted to the Curriculum Committee of the UNZ the preferred name for the new degree was the Bachelor of Food Technology. However, the Committee recommended the title of BAgrSc (Food Technology) as this would not require any changes to university legislation. Other university colleges pointed out that the proposed degree was sufficiently different from its predecessor to warrant a new name, so Massey reverted to the favoured title. The strongest opposition to the new degree came from the Canterbury University College, where the Faculties of Science and Engineering argued that the degree was unnecessary, inconsistent with policy and based on an unsuitable structure.[2] Despite these concerns, in 1960 approval was granted to develop the Bachelor of Food Technology, and the necessary legislation passed. The new degree, the first such in the world,

[1] Dr A. Stewart, Statement in support of application for consideration of the Degree Bachelor of Food Technology, 12 August 1959, Vice-Chancellor's Correspondence, 1.1/1/1, Box 53, Massey University Archives.
[2] *Ibid*.



Professor Peren with Perendale sheep, 1978.

Wool classing, 1965.

was introduced in 1961, and Professor Kelvin Scott was appointed to the Logan Campbell Chair of Food Technology. It was greeted in the press as an exciting development that promised to play a key role in diversifying and increasing New Zealand's exports.

In 1944 and again in 1956 Massey had called for the establishment of a New Zealand Veterinary School, and had maintained that veterinary education should be conducted in close association with training in agriculture. At that time veterinarians were trained in Australia in conditions that were different from those they would encounter in New Zealand. In 1959 the Senate of the UNZ asked the UGC to recommend a site for a veterinary school. The central issue was whether veterinary training in New Zealand should be associated with medicine or agriculture. Veterinarians in New Zealand believed that training should be associated with agriculture and were overwhelmingly against a connection with medicine, since international opinion at the time was moving from an emphasis on curing disease to disease prevention. The Committee recommended that veterinary training in New Zealand should be associated with agriculture rather than medicine on the grounds that the promotion of animal health would lead to increased production. The choice was between Massey and Lincoln. Massey's submission to the Committee was based on its great strengths in animal science, and it argued that with the addition of a veterinary school, Massey would become a balanced college covering all aspects of animal production. Lincoln College was rejected because it was too far from Canterbury University and thus too isolated academically, and it was noted both that Victoria was developing an arts faculty in Palmerston North and that science teaching had began at Massey. It was assumed that science teaching in the Manawatu would be concentrated at Massey

where it would be required for the furtherance of agricultural education. It was therefore recommended that the veterinary school be located at Massey.

It was later claimed that the Labour Government had been prepared to announce the selection of Massey as the site for the veterinary school before the 1960 election. However, South Island Members of Parliament forced a postponement. The change in government re-opened the debate over the location of the school and caused considerable delays. Dr Stewart maintained that parochial interests were taking precedence over national needs, and reiterated the College's opinion that veterinary training would develop faster associated with agriculture than if it were tied to a medical school.

In 1961 Cabinet confirmed the recommendation of the University Senate that the veterinary school should be located at Massey. The following year Professor Ira Cunningham was appointed to the Chair in Veterinary Science and became Dean of the Faculty of Veterinary Science. In 1964 the first class of 32 students began the second year of the BVSc.

With the growth in the number of courses available at Massey, faculties were created in 1962. Initially there were Faculties of Agricultural and Horticultural Sciences, Food Technology and Veterinary Science. Professor Ian Campbell, appointed the first Dean of the Faculty of Agricultural and Horticultural Sciences, believed it was important to agriculture that some of the traditions developed in agriculture at Massey be strongly held while the new multi-faculty University was developing. In 1963 the Faculty of Science was established, though the following year it was temporarily renamed the Faculty of Biological Sciences, a name used until 1968.

Massey had developed considerably in a short space of time from a school of agriculture into a multi-faculty institution. Science teaching had started for the sake of agricultural students who would otherwise spend their first year at another university. Food technology was a logical extension of the agricultural science degree, and Massey's status as an agricultural college had made it the obvious home for the new veterinary school. These developments associated with agriculture constituted the foundation for Massey's next momentous development, becoming a university.

Merger

In 1960 Victoria University College established an offshoot in the city with the particular aim of providing a focus for extramural teaching to New Zealanders wherever they lived. Palmerston North University College (PNUC) housed a branch of Victoria's Arts Faculty, and it offered tuition in Geography, optimistically described as 'the nucleus of a science faculty'. PNUC provided teaching in the arts and social sciences to internal students in the Manawatu as well as to extramural students in New Zealand and overseas. The Council of Massey Agricultural College had offered Victoria University land adjacent to the Massey campus, anticipating that the two University Colleges would eventually be merged into a single university. The enthusiasm for a close association with the arts and pure sciences was a departure from earlier attitudes. In 1957 Massey's Professorial Board had recommended that the College should aim at developing into a university concerned primarily with rural industry and the related technologies and humanities and not as a full multi-faculty university. In 1959 Dr Stewart admitted that Massey had previously expressed

fears of being overwhelmed by an arts faculty. He maintained that when the College had a total degree enrolment of around sixty students and double that number of diploma students, such concerns were justified. However, Massey now had 180 degree students and expected to have 300 by 1962. He also attributed the change to the fact that 'Agriculture has developed so far now that I feel we can hold up our heads in any company and need have no fear of domination by the arts or pure sciences'.[3] Massey staff were also concerned that the choice of a separate site would lead to a split between the teaching of arts and sciences. Perhaps the greater fear was that science education might develop at Hokowhitu rather than at Massey. While an agricultural college without the arts was undesirable, an agricultural college without the sciences was not viable.

While Victoria's Council was grateful for Massey's offer of land, it believed that the Hokowhitu site was more suitable than that available at Massey. Victoria's Vice-Chancellor argued that a separate location was preferable for the time being as it left the question of a merger open to further consideration. In 1960 Dr S.G. Culliford, Principal of PNUC, stated that the separate location was appropriate: 'Massey is an agricultural college and from its inception has trained people for work in agriculture. Victoria is a large multi-faculty university, and does a different job....Massey's public is the farming community from North Cape to Cook Strait - Victoria's the urban and professional public within the middle district'.[4] He believed that if PNUC remained separate it would be able to develop into an independent university. For these reasons PNUC was built on a site at Hokowhitu that had been provided by the Palmerston North City Council.

That was not the end of the matter as there were strong arguments in favour of a merger. In 1961 both the Pro-Chancellor of the UNZ and the Chairman of the UGC stated that Massey Agricultural College and PNUC could merge into a single university. Surveying the developments that had occurred at Massey, the Pro-Chancellor of the UNZ, Dr L.J. Wild, said that 'A faculty of arts, a faculty of science, a world-renowned school of agriculture, a school of food technology and a school of veterinary science - surely, if combined could form the nucleus of a university college at least - even the nucleus of a full University of the Manawatu.'[5]

In 1962 the UGC assembled representatives from the Councils of Victoria University and Massey College to discuss a merger of the facilities in Palmerston North. The two bodies already shared a connection: after the dissolution of the UNZ, Massey had chosen to associate with Victoria University and to teach for the degrees of that University. Parliament passed the Massey University College of Manawatu Act later in 1962, and on 1 January 1963 Massey College merged with Victoria's Palmerston North branch. The College had direct access to the UGC, but still taught for the degrees of Victoria University. Massey also assumed responsibility for extramural teaching. On 1 January 1964 Massey University of Manawatu emerged as an autonomous university able to grant its own degrees. A bill was enacted in 1966 to change the name to Massey University.

The name of the new institution, in particular the retention of 'Massey' in the title, was a controversial matter. Staff at PNUC were concerned that the name's agricultural associations would give a misleading picture of the new institution and might affect enrolment and staff recruitment. One PNUC student complained that 'The College will be

[3] Dr Stewart to Mr H.C. Johnson, 17 June 1959, Vice-Chancellor's Correspondence, 1.1/1/1 Box 30, Massey University Archives.
[4] *Manawatu Times*, 28 April 1960.
[5] *Manawatu Times*, 15 April 1961.

colloquially known as Massey, and arts students will be associated in the public mind with cows and manure'.[6] The Massey College Council, however, argued that staff recruitment would be adversely affected if the name Massey was omitted.

Buildings

The Faculty of Agricultural and Horticultural Sciences did not receive high priority in Massey's 1960s building programme as it was comfortably housed in the Main Building and Wharerata. However, planned reconstruction of the Main Building as a home for the Humanities meant that a new building was required for the Faculty of Agricultural and Horticultural Sciences. The staff of Massey College had previously argued against the adoption of a spacious, American-style campus because they favoured the construction of multi-storey buildings that would allow the different branches of learning to be housed together. This was reflected in plans calling for a six- to eight-storey tower for Agricultural and Horticultural Science. However, Professor Campbell, who had evaluated university buildings in Australia, believed that a tower block would be inappropriate. He favoured buildings of two to three stories sited in a square formation around a central concourse. A committee was formed within the Faculty to contribute ideas, and a plan evolved to build two major blocks, A and B, an engineering block and a wool building, with each forming one side of a square. However, the Wool Building was regarded as a different type of building and was not to be located adjacent to the main blocks. Instead a lecture theatre block would take its place.

The 1965 Annual Report cited inadequate and dispersed accommodation as one of the problems confronting the Faculty. Dr Stewart stressed to the UGC that the Faculty of Agricultural and Horticultural Sciences occupied a special position within Massey and that it had strongly influenced the character of the whole University. The provision of adequate buildings for the Faculty was thus of vital importance. The planned buildings were to bring together faculty staff who were currently scattered across the campus, and allow them to maintain contact with faculties associated with agriculture. That meant locating the building near the Faculties of Food Technology, Veterinary Science and Biological Sciences, and this was done. The Agricultural Engineering block was first occupied in November 1972, A Block in December 1974, and B Block in January 1976. There was some controversy over the plan to include a large central space inside the lecture block and this delayed construction somewhat, but the completion of the buildings in 1976 brought all the Departments in the Faculty together for the first time in over twenty-five years.

Extension and Research Activities

Extension work remained an important activity for the Faculty of Agricultural and Horticultural Sciences. The 1964 Annual Report noted that more agricultural students were including extension as a subject in their degrees. The University believed that sending out an increasing number of people properly trained to perform extension work would make a significant contribution toward the drive for increased agricultural production.

The Faculty continued to host short courses for those involved in agriculture, and these attracted large enrolments. In

[6] *Manawatu Times*, 19 June 1962.

1961, for example, Massey held the following conferences:

Course	Duration	Attendance
Poultry Farmers	3 days	184
Dairy Farmers	2 days	438
Sheep Farmers	3 days	610
Wool Conference	3 days	210

A Farm Cadet course was introduced in 1968. This course was organised by Federated Farmers with assistance from the Correspondence Institute and it made use of some Massey lecturers and facilities. In addition numerous groups of farmers visited during this period to update their knowledge.

In 1962 Massey hosted a joint conference of two commissions of the International Society of Soil Science. The conference dealt with soil fertility, plant nutrition and soil classification. It was attended by 180 scientists from 37 countries and 120 from New Zealand, and was, at that time, the largest international gathering ever held in Palmerston North. The conference was treated as an affair of state, with both the Prime Minister and Leader of the Opposition welcoming the delegates to Massey. The Mayor of Palmerston North said that '(the conference) emphasises the esteem in which Massey College and the neighbouring Grasslands Division and their associated institutions are held in world scientific circles'.[7]

The Drainage Extension Service continued its work providing technical assistance to farmers and the service was successful enough to be self-supporting. This in turn provided teaching and research opportunities for staff and students. Asian countries also benefited from extension work during this period, in projects involving many staff of the Faculty. For example Professor Ron Schwass, of the Department of Agronomy, played a significant role in the establishment of the Faculty of Agriculture at Khon Kaen University in Northeast Thailand, a New Zealand Government project of the mid-1960s. Jim Hensen spent a year as a consultant at the Arrey Institute of Dairy Technology in India, helping to set up courses there.

Funding for research was very poor in the 1950s. The Department of Education was unsympathetic, and little research funding was available until the 1960s. The 1964 Annual Report noted that the research potential of the Faculty of Agricultural and Horticultural Sciences remained. By 1969 direct industry support for research was slowly beginning to improve. Departmental research at Massey received financial assistance from departmental and faculty research funds and grants from the University Research Committee, the New Zealand Forest Service, the Scientific Research Distribution Committee and the Nuffield Trust.

During the 1960s other research was conducted at research units that were not affiliated to particular departments, but had a supervisor responsible to the University Council. They were advised by committees that included members drawn from outside the University.

In 1963 a Random Sample Test Unit was established at the Massey poultry farm, under Mr M.R. Patchell. This unit, designed to evaluate breeding stocks, was housed in buildings provided by the poultry industry. The Government then agreed to consolidate poultry research at Massey, and the work done at the

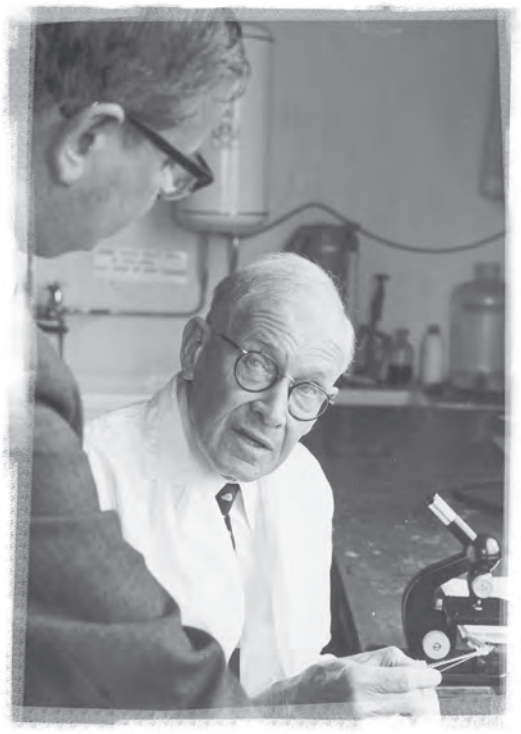
[7] *Manawatu Times*, 13 November 1962.

Department of Agriculture's poultry demonstration plant in Upper Hutt was transferred to the new Poultry Research Centre. The Government made a grant towards the cost of establishing the Centre and agreed to contribute towards the running costs. A committee under the chairmanship of Professor A.L. Rae and including representatives from Massey, the Poultry Board and the Department of Agriculture was set up to oversee research. The Centre conducted random sample tests for the benefit of industry, and research on behalf of industry and the Government. Research concentrated on poultry nutrition including the food requirements of stock at different ages and comparisons of the nutritional value of available feedstuffs.

In 1963 the No. 2 Test House was completed at the Pig Research Unit, a building that had been financed jointly by the National Pig Council and Massey. The Unit undertook work on whey feeding supported by the industry and the Department of Agriculture. It also co-operated with the National Pig Breeding Centre in the production and sale of crossbred sows. Facilities at the Centre were used for research and teaching.

In 1966 the Dairy Research Institute moved from the Main Building to a laboratory block of its own on the other side of Tennent Drive. The Institute also transferred some of its activities from the Dairy Factory to its own process hall.

Additional research centres were developed in the 1970s. In 1969 a staff committee proposed the establishment of a Market Research Centre at Massey after the National Development Conference had called for more marketing education and research. The committee envisaged the Centre would be involved in all aspects of marketing, but said that much of the work would be concerned with agricultural products. The University agreed in principle



Dr F.W. Dry with Bob Barton.

The Agricultural and Horticultural Sciences Building, 1980.

to the establishment of the Centre at Massey. Professor Alan Frampton, who directed the Centre, warned 'If increased resources are not devoted to marketing training and research, New Zealand and New Zealand agriculture face a dismal future'.[8] Work began in 1970 with the appointment of three research officers. Initial emphasis was on milk, dairy products and meat marketing in New Zealand.

The Plant Growth Unit was formed in November 1974. The Unit comprised glasshouses, shadehouses, laboratories and associated buildings, and was located next to the Plant Physiology Division of the DSIR. It was intended to replace facilities on the main campus.

Associated with the Plant Growth Unit was the New Zealand Nursery Research Centre, established in co-operation with Massey in 1975. The New Zealand Nurseryman's Association, concerned that the research needs of the industry were not being met, provided funding for the Centre to investigate problems associated with plant production, disease and marketing. Government funding became available later, while Massey contributed facilities and supervised research. When the Nursery Research Centre was first proposed, the Association cited the Poultry Research Centre as the precedent for the type of organisation it wanted to establish. A notable early project was the effort to provide High Health propagating stock of daphne plants that would be released back to the industry.

In 1975 the Ministry of Foreign Affairs provided funding for the establishment of a Seed Technology Centre, associated with the Department of Agronomy, and with the close involvement of Professor B.R. Watkin. The principal aim of the Centre was to train Colombo Plan students from South East Asia and the Pacific. It was completed in 1976, and the first three-month Certificate of Seed Technology Course started in December of that year.

Academic Developments

Throughout the 1960s there was a continuation of the trend noted earlier towards more academic content in courses. There was by then a growing body of agricultural knowledge, and with growing demands to raise the national income it was important that this knowledge was brought to bear on the problems associated with increasing agricultural production. Bob Barton, Reader in Sheep Husbandry, recalled that courses became more scientific, while Dr Stewart said that time at Massey was too valuable to be spent learning how to dig post-holes, so more practical work was done during the students' time on farms.

Diplomas

In 1959 the College Council chose to replace the Diploma in Agriculture with Diplomas in Sheep Farming and Dairy Farming. While the earlier diploma had taken two years to complete, the new courses lasted one year and consisted of three terms. The change was a direct result of the rapid rise in the number of agricultural degree students at Massey. The College Council anticipated that by 1961 there would be no accommodation available on campus for diploma students, so all DipAg students would have to live in Palmerston North, and the Council believed that this would deter potential students to the extent of making the course unviable. Students who wished to enrol in the new diplomas had to be at least 19 years old and to have completed two years of practical work on a New Zealand farm before enrolment, a requirement that effectively

[8] *New Zealand Herald*, 18 July 1969.

prevented many foreign students from taking this course. In 1966 the intake for Sheep and Dairy Farming Diploma courses was switched from February to August. The change allowed the students to undertake summer practical experience between two sessions at Massey.

In 1972 these diplomas were again replaced by a Diploma in Agriculture. One reason for the change was that diversification in agriculture was blurring the distinctions between sheep, dairy, cropping and beef farms. At the same time, many farms were experiencing decreasing profitability. The number of people working in agriculture was also declining, and this was reflected in the slow growth in the number of diploma students. The new diploma aimed to strengthen the core subjects in general agriculture, farm management and meat production, and to give options in dairy and sheep production.

Massey's development into a full university raised questions about the relative importance of diploma teaching. At the 1959 graduation ceremony Dr Stewart commented that by teaching both at diploma and degree level at the one institution, the needs of primary industry were being met, but that this endangered the standard of degree teaching which should be Massey's priority if it was to honour its university obligations. He suggested that the development of a diploma school at Massey with a separate staff might be one possible solution. Such a school would share facilities and benefit from contact with those staff teaching degree students. In 1961 degree students outnumbered those enrolled in diploma courses for the first time in Massey's history. It was noted in Massey's Annual Report that 'Though it is fully appreciated that courses leading to degrees are of greater national importance than those leading to diplomas, because of their importance to the community…the College hopes to maintain the same annual output of farming diplomates as in recent years - approximately one hundred'.[9]

At the 1964 Massey Dairy Farmers Meeting the Vice-Chancellor again addressed the importance of diploma teaching. He was concerned by the widespread belief amongst the farming community that since Massey had become a full university its interest in diploma students and diploma teaching had declined. Dr Stewart asked farmers to spread the word that Massey still regarded diploma teaching as a major responsibility. In his address at the 1977 Jubilee Dr Stewart said that 'far more diplomates are handled by the Faculty each year than ever before and this level of teaching - so important to our primary industries - will always be a feature of the Massey scene'. [10]

Degrees

The 1970s saw a strengthening of the Faculty's teaching of agricultural economics, which eventually led to the development of the University's Faculty of Business Studies. This was largely on the initiative of Professor Alan Frampton. First, the Bachelor of Agricultural Business and Administration (Agric) was introduced in 1971 to meet the demand for graduates with training in applied commerce, business management and marketing. Regulations for a post-graduate Diploma of Business Administration (Agricultural), an honours degree and a masters degree, MBA (Agric), were prepared. The masters degree, introduced the following year, was the first MBA course in New Zealand. In 1972 Massey received approval to replace the BBA (Agr) with a general business degree, the Bachelor of Business Studies (BBS), and no students

[9] Annual Report, 1961, Documents of Council, 1.2/1/1, Massey University Archives.
[10] Massey Jubilee 1977: Welcoming address by the Vice-Chancellor to former students of the Faculty of Agricultural and Horticultural Sciences, 'Massey Jubilee 1977' Box, Massey University Archives.

ever graduated BBA (Agr). Once again, agriculture had provided the basis for a significant academic development at Massey.

In 1977 the Bachelor of Agricultural Economics was introduced. This course utilised teaching available within the Faculty and around the campus to produce graduates capable of analysing economic problems relating to the development of agriculture in New Zealand and overseas.

In 1971 the Faculty made provision for honours bachelor degrees for agricultural and horticultural science students. Professor Campbell recalled that the traditional pattern had seen good students within the Faculty being able to complete a four-year degree before going on to masterate studies. Those who wished to go further would travel overseas to complete a doctorate. The pattern changed with the introduction of the honours degree. Now able students could complete an honours course in their final year and then proceed straight to doctorate studies without undertaking a masters degree. That meant that students were now completing their doctorate in New Zealand, rather than overseas. The Faculty of Agricultural and Horticultural Sciences was following the example set by other faculties on campus when it adopted this new pattern. Professor Campbell said that there was at first some resistance within the Faculty to the honours system, but the change was soon the accepted pattern.

In 1979 a completely new BAgr degree was introduced. Students could major in either Production and Management or Rural Valuation. The new course was intended to meet the growing demand for degree training, including practical work, in agricultural production, farm management and rural valuation. The new degree was also a departure from a heavy emphasis on pure sciences. Previously, BAgr students had sat a first examination of science subjects, followed by just years two and three of the four-year BAgrSc degree. The first examination with its heavy emphasis on science presented a considerable barrier to many who could otherwise make important contributions to agriculture. This was especially true of students from rural areas, who did not always have the same access to quality high school science teaching as their urban counterparts. Devoting the first year to science also meant that students had little contact with the Faculty, and this initial lack of agricultural content was a source of discontent. The introduction of the new BAgr degree enabled the emphasis on basic science to be replaced with science teaching in an applied context for those more practically-oriented students.

Farms

In the late 1950s Massey continued to require more replacement farmland as more prime land was taken for developments such as the DRI and housing. As teaching and research expanded and diversified it was also important to increase the total acreage. The No. 3 Dairy Unit was established on the former Bourke Property, which had previously been set aside for a Teachers College. Once Massey received approval to use the land, the UGC made its first commitment to agricultural research by approving "grant-in-aid" finance for a nutrition unit and the milking shed to be built on the farm. This land had heavy soil, and the first study undertaken there was into the feasibility of wintering cattle on heavy soils.

In 1968 Massey submitted a request to

the UGC for funding to replace facilities at No. 1 and No. 2 Dairy Units with a Dairy Production Centre. The Centre would meet the research and teaching demands of the growing number of agricultural, veterinary and food technology students, and provide facilities for extension work. Dr Stewart argued that Massey's status as the major centre for advanced training in dairy production and associated work made efficient facilities essential. The UGC agreed to make a contribution to the cost of the Dairy Production Centre, and it was completed in 1969. No. 2 Dairy Unit was incorporated into No. 1 Dairy Unit in 1969.

In 1973 Massey took over 400 acres of land adjacent to the No. 3 Dairy unit from the Brogden (274 acres) and Lovelock (126 acres) estates, and established a single dairy farm, the No. 4 Dairy Unit. The Unit was run as a seasonal supply dairy farm to investigate the potential for greater efficiency on large-scale dairy farms, and its herd of some 300 cows was the first really large institutional herd in New Zealand. In 1976 Massey's farmland was re-organised into University Farms and Research Units, under the Assistant to the Vice-Chancellor (Farms and Associated Research Units), a position filled during this period by Professor Alan Frampton. The intention was to separate intensive research from commercial farming so that the farms could concentrate on generating income. The reorganisation was partly a response to declining returns from farming, but it was also seen as a opportunity for faculty members to become more involved in the management of the farms. The No. 1 Sheep Farm, the No. 2 Sheep Farm and Best's Property between Old West Road and Massey were combined to form the Sheep and Beef Research and Development Unit. The No. 3 Dairy Unit became the Dairy Cattle Research Unit. The will of Mr Sydney Campbell of Masterton named Massey as the lessee in perpetuity of 'Riverside', a sheep farm in the Wairarapa. Massey took over the management of the property in March 1978. The property had been left to a Trust that received some of the income generated by the farm and made funding available to researchers 'for the study, experimentation with and development of farming in all its branches but particularly in the fields of agricultural and pastoral farming'.

Massey also bought the Keeble Farm, a 230-ha sheep and beef cattle property between the campus and Linton Camp. This property was acquired to make up for the Pahiatua Block which had been lost to housing development. The farm underwent a development programme to transform it into an intensive farming system carrying 18 stock units to the hectare.

Massey University Agricultural Research Foundation

The Faculty of Agricultural and Horticultural Sciences founded the Massey University Agricultural Research Foundation to commemorate Massey's fiftieth Jubilee in 1977. Bob Barton made a substantial contribution to the success of this, raising donations from people and companies associated with agriculture. The Chancellor said that 'the purpose of the Foundation was to stimulate and finance a wide range of agricultural research at the university'.[11] The Foundation would endeavour to see the results of research disseminated widely throughout the scientific community and the general public. Professor Frampton made it clear that the formation of the Foundation was not a criticism of

[11] *Manawatu Evening Standard*, 7 April 1977.

PROFESSOR IAN CAMPBELL

He was born in Gore, Southland, in 1915. Having completed a BAgrSc at Massey in 1936 he took up a position at the DRI as officer in charge of work at the Massey No. 2 Dairy Unit. He was awarded a PhD by the University of Missouri for studies of milk secretion and endocrinology. His DRI work centred on the effects of various farm factors, such as the level and types of pasture feeding on the flavour, composition and manufacturing qualities of milk.

Appointed to Massey's third Chair, in Dairy Husbandry, in 1948, he led that Department until 1965, then became the first Dean of Agricultural and Horticultural Sciences in 1962. He held that position until 1977, finally retiring as Assistant to the Vice-Chancellor in 1980.

Professor Campbell served on many industry bodies, including the Agricultural Training Council and the NZ Pork Industry Board, and was President of the NZ Society of Animal Production and the NZ Dairy Science Association. Overseas assignments were undertaken for the World Bank/FAO in Kenya and Burma, and for the Dept of Foreign Affairs in Thailand and Malaysia.

As a student at Massey he was President of the Degree Students' Association and represented Massey in rugby and cricket, as well as winning tennis singles and doubles cups.

An Emeritus Professor, he was awarded the Massey Medal in 1993.

government funding, but that 'For us to play our full part we need the extra means as a backup'.[12] The Board of Trustees set out to raise $500,000 and approved the establishment of 19 regional committees throughout the North Island to assist in fundraising. Another committee was set up in London to gather donations from Europe. The committees were made up of Massey graduates and diplomates, farmers and other local people. In its first year the Foundation received donations and pledges totalling $160,000, and by early 1978 sufficient funds had been raised to allow grants to be made. The first four projects included studies of slow-release phosphates, lupins, automatic stock drafting, and the implications for pastoral farming of rising transport costs.

Staff

Professor Ian Campbell.

[12] Ibid., Jubilee Supplement, 6 May 1977.

PROFESSOR ALAN FRAMPTON

Alan Frampton was born in Morrinsville in 1929, became a farmer and later decided to enter Massey University, gaining a BAgrSc (1963) and MAgrSc with first class honours (1965), followed by a PhD in agricultural economics at Cornell. He was appointed to the Walter Clarke Buchanan Chair in Agricultural Economics and Farm Management at Massey in 1968, and also served as Dean of the Faculty of Agricultural and Horticultural Sciences from 1978–1983. An effective innovator, he played a pivotal role in the initial development of business studies at Massey, and promoted the establishment of the first Chair in Marketing in New Zealand, the Centre for Agricultural Policy Studies and the Market Research Centre. He was in the forefront of extensive discussions on curriculum reform in the Faculty of Agricultural and Horticultural Sciences and was instrumental in the introduction of the 'reformed' BAgr degree in the late 1970s, and developing a new degree in agricultural economics. In addition to his responsibilities as Head of Department and Dean, he was appointed as an Assistant to the Vice-Chancellor to oversee the management of the University's farms, and achieved considerable increases in their efficiency. He retired from Massey in 1983.

As well as running a highly successful dairy farm near Morrinsville, he has led many missions overseas for such bodies as the New Zealand Dairy Board. He was also the first Chairman of the Board of AgResearch (1992–96), President of the New Zealand Association of Crown Research Institutes, and a ministerial appointee on the New Zealand Dairy Board (1973–1993). He is currently Chair of the Tatua Cooperative Dairy Company Ltd, and of Dairy Insight, as well as a member of the 'New Zealand Committee' of the C. Alma Baker Trust which is responsible for Limestone Downs.

He is a Fellow of the New Zealand Institute of Agricultural Science, an Emeritus Professor of Massey University, and is to be awarded an Honorary Doctorate by Massey University in May 2002.

Dr. FRANCIS DRY

Born in Yorkshire 1891, he gained a BSc with first class honours and a MSc at the University of Leeds. A study trip in the United States funded by a Carnegie scholarship followed. As Ackroyd Memorial Research Fellow at Leeds he carried out research on the patterns of growth of mouse hairs, for which he was awarded a DSc in 1925. He then turned his attention to the inheritance of black fleece colour in sheep, before being appointed to Massey Agricultural College in 1928 as a senior lecturer in agricultural zoology.

He studied the coarse hairy fibres (called halo hairs) in lambs, and discovered that a high rate of hairiness was genetically determined. While hairiness in wool was considered a fault, the fleece of mature sheep carrying the gene responsible (the N gene) was highly suitable for carpet production. This research was to result in the development of the Drysdale sheep breed. His book, *The Architecture of Lambs' Coats*, was published 1975.

A quiet and unassuming man, and a meticulous and dedicated researcher, his bespectacled figure was seen around Massey well into the 1970s, and he was affectionately known as "Daddy Dry". He died in 1979. Honours received included an Honorary DSc from Massey (1966), OBE (1973), and Fellow of the New Zealand Institute of Agricultural Science (1976).

Diploma in Sheep Farming class, 1967, neat and tidy in white shirts and ties.

Diploma in Agriculture class, 1973–4. A marked change in appearance from the 1967 photo.

Students

The image of students at Massey changed considerably between the early 1960s and the late 1970s as a result of changes in the student body and a more professional attitude on the part of students, particularly after the introduction of continuous assessment.

In 1960 a reporter wrote that agricultural students were mostly thought of as buffoons in capping processions and the stagers of pranks that occasionally shocked the people of Palmerston North. Bob Barton said that relations between Massey and Palmerston North were generally satisfactory, but always worsened after the procession, when some students would create a lot of trouble in town.

In 1966 the *New Zealand Journal of Agriculture* reported that students at Massey were changing as a result of an increase in the number of women students, and the College's evolution into a multi-faculty university. Agriculture students were also seen to benefit from being part of a more diverse student body, and the new campus environment helped to broaden their outlook.

One significant change in the student body of the Faculty of Agricultural and Horticultural Sciences was the growth in the number of degree students. In 1960 Massey College had 201 undergraduate degree students and 294 diploma students. By 1961 degree students slightly outnumbered diploma students 242 to 237, and in 1975 there were 517 degree students and 157 diploma students. By 1970 it was recognised that increasing student numbers in the Faculty were causing communication difficulties. There was considerable campus agitation for greater student involvement at all levels; a Student-Staff Consultative Committee was established, and a Faculty Association formed, with staff and student

representatives from every level of every course in the Faculty. A mentor scheme was also reintroduced, and each first-year degree student was associated with a staff member.

In 1977 the Vice-Chancellor spoke of the change in student behaviour that had occurred at Massey, noting that students of the 1970s were putting increasing effort into their studies. There were a number of reasons for the change, but Dr Stewart singled out the introduction of continuous assessment: 'The effect of this on individual students is that they participate less in extracurricular activities and I think this is regrettable.'[13] He believed that pressing for the introduction of continuous assessment was the biggest mistake students ever made.

Agriculture at Massey

The evolution from an agricultural college to a university raised questions over the future importance of agriculture at Massey. After all, the Faculty of Agricultural and Horticultural Sciences was now but one of many faculties. The Manawatu Evening Standard noted that 'While the move from agricultural college to fully fledged university - if it does not put the cows and sheep "into the back seat" - will at least make them share the driving seat'.[14]

Those connected with the University took every opportunity to reiterate Massey's commitment to the agricultural sector. In 1964 Dr Stewart told farmers that 'although our status may have changed, this does not mean that Massey will not continue to serve Agriculture as it has done in the past. On the contrary, with the addition of new faculties and the expansion of old ones Massey will be in a better position than ever before to serve Agriculture well'.[15]

In 1968 the Member for Manawatu and Massey Council member, L.W. Gandar, sparked controversy with statements made in Parliament regarding Massey's role. He saw this role as primarily to train more and more people to service the primary industries – agriculturists, horticulturists, food technicians and people educated in biological sciences. He went on to say that 'I see Massey's special role in agriculture in its widest sense'.[16] A Labour MP, J.L. Hunt, argued that 'Massey University is surely to be seen as developing into a place where education rather than just the technology of ram's milk distribution takes place'.[17]

The following year the Vice-Chancellor said that the Minister of Finance, Mr Muldoon, had asked universities to do more to help the national economy, and that this was a priority. 'Massey considered its special role was to cater for the educational needs of the primary industries.'[18] The University's submission to the 1970 Training in Agriculture Conference confirmed Massey's commitment to serving the needs of the community by providing agricultural education.

At the Massey Jubilee in 1977, Dr Stewart felt obliged to respond to those who suspected that Massey was diversifying at the expense of agriculture. He pointed out that in all the years before 1943 Massey produced a total of 64 BAgSc graduates. In 1977, by contrast, 80 students graduated with their first degrees in agricultural and horticultural science. There were more than 1600 students studying in areas concerned with New Zealand's primary industries. He described the University as unique because of its strong and dominant agricultural theme. However, in 1978 the Chancellor's graduation address hinted at the change in emphasis. He said that 'The basic agricultural skills of the

[13] Massey Jubilee 1977: Welcoming address by the Vice-Chancellor to former students of the Faculty of Agricultural and Horticultural Sciences, 'Massey Jubilee 1977' Box, Massey University Archives.
[14] *Manawatu Evening Standard*, 21 September 1965.
[15] Dr A.Stewart, Opening remarks to Dairy Farmers' Meeting, 1964, Vice-Chancellor's Correspondence, 1.1/1/1, Box 12, Massey University Archives.
[16] *Manawatu Evening Standard*, 12 July 1968.
[17] *Ibid*., 13 July 1968.
[18] *Ibid*., 4 February 1969.

Exchange students from California State Universities, with Ken Eastwood at right, 1970s.

country have been — and are being — well served. Without neglecting these it is now the industrial and cultural needs of the 1980's and the 1990's for which the University must increasingly prepare'.[19]

— *Michael Bartleet*

[19] Notes for Chancellor's Address, Graduation 1978, Vice-Chancellor's Correspondence, 1.1/1/2, Box 13, Massey University Archives.

CHANGES AND CHALLENGES 1980–2002

The Environment

A number of radical changes occurred in the agricultural, economic and political sectors during this period, posing new challenges for Massey, especially in the area of finance. Many of the changes that occurred in the University were responses to these challenges, and the Faculty of Agricultural and Horticultural Sciences was particularly quick to re-examine and adjust its structure and activities to enable it to maintain its pre-eminent position as a provider of tertiary education in the land-based sector.

First, agricultural and economic changes. In the early 1980s world prices for sheepmeat, wool and beef dropped, and this was followed by a general world recession. Supplementary Minimum Prices (SMPs) introduced in June 1978 were support payments to farmers made by Government to maintain incomes at a certain level, and part of a wide range of direct supports to agriculture, but these were ended in June 1984. A subsequent change of government was marked by a movement from interventionist to 'more market' economic policies, policies that were also followed by marketing boards such as the New Zealand Meat Board and the Wool Board. By 1989 New Zealand was estimated by the OECD to have the lowest levels of support for agricultural products of any member country.[1] These and other factors led to substantial drops in farm incomes in the mid-1980s. For example, sheep farmers' incomes for the June year 1986 were 55.2% lower than for the June year 1985,[2] and there was a significant drop in the numbers being employed as farm labour. In addition, real farmland values fell by some 40%.[3]

The inevitable result was that traditional forms of farming became less attractive. A decline in the numbers of mid-sized farms (mainly beef and sheep) between 1984 and 1990[4] was accompanied by a shift to dairyfarming and horticulture, and to the farming of more exotic animals such as deer, goats, and even llama. For example, estimated numbers of deer on farms rose from 100 000 in 1980 to 780 000 in 1990.

Understandably, despite the fact that agricultural activities in 1989 were still responsible for 54% of New Zealand's exports,[5] young people lost interest in careers in agriculture. There was already a downward trend in enrolments in the Faculty of Agricultural and Horticultural Sciences, probably partly due to the number of sub-degree courses offered by polytechnics, and the rural downturn, combined with a drop in rural employment due to technological changes, enhanced this. Total student numbers in the Faculty fell 38% from 1534 in 1984 to 947 in 1988, and the number of new entrants into degree and diploma programmes in 1988 was the lowest for some 25 years. Steps were taken to reduce the staff establishment by 30, since according to funding formulae the Faculty was overstaffed.

Second, there were major changes in government policies towards the tertiary education sector, which only exacerbated concerns about enrolments. The Labour

[1] *OECD Economic Surveys: New Zealand, 1990/91*, Paris, OECD, 1991, p. 61–2.
[2] *The New Zealand Economy: Issues and Policies*, Stuart Birks & Srikanta Chatterjee (eds), 3d ed., Palmerston North, Dunmore Press, 1997, p. 140–41.
[3] *Farming Without Subsidies: New Zealand's Recent Experience*, Roy Sandry & Russell Reynolds (eds), Wellington, MAFF/GP Books, 1990, p. 2.
[4] Fairweather, John R., *Agrarian Restructuring in New Zealand*, Canterbury, Agribusiness and Economics Research Unit, Lincoln University, 1992, p. 25.
[5] *New Zealand Official Yearbook, (NZOYB) 1990*, p. 439.

Government that came to power in 1984 adopted a free market approach to the funding of tertiary education, an approach also followed by the National Government elected 1991. In 1990 the UGC, which administered the block grants funding universities, was abolished on the recommendation of the Working Group on Post-Compulsory Education and Training. This brought policy making for the tertiary sector more closely under ministerial jurisdiction. The Educational Amendment Act of the same year established that government funding for universities would be based on the number of equivalent full-time students enrolled (EFTS). In addition it determined that overseas students, always numerous in the Faculty, would have to pay fees that covered the full cost of providing tuition, which made fees less competitive by international standards. It therefore became particularly important to take steps to attract more enrolments, especially postgraduate students who played an important role in research projects.

Young people were probably also discouraged from enrolling in tertiary education by a series of changes in the system of fees and allowances. Before 1989 most New Zealand tertiary students paid very little in the way of fees, and the majority were eligible for allowances to cover living costs. From 1989 the rates for allowances became dependent on age and parental income, and fees started to rise, with variations depending on course and institution, reaching an average of $1900 p.a. by 1994. In 1992 allowances became much more tightly targeted. The majority of students received none, so had to take out loans from the Government to finance their studies. Following the 1994 Todd Report, which looked at the levels and structure of state subsidies for the tertiary sector, the Government announced that by 1999 students would be expected to pay an average 25% of their fees, and this has occurred.

The free market philosophy apparent from 1984 also extended to research funding. Government substantially reduced its direct funding of research, moving towards the purchasing of specific research projects and outputs, and encouraging collaboration between scientists in different organisations. The abolition of the UGC meant universities lost the research component of their block funding. The Foundation for Research, Science and Technology (FRST) was established in 1990 with the task of allocating research funding from a contestable pool. The biggest fund in this pool was the Public Good Science Fund (PGSF)[6], supporting research of social or economic benefit to New Zealand unlikely to be funded by non-government sources. Initially this fund could not be accessed directly by universities, only by university research staff collaborating with those of other organisations. By 1994 universities were able to access this fund directly, but with limits. For the year ended June 2000 universities were only allocated 7% of the PGSF, the majority (82%) going to Crown Research Institutes.[7]

The Marsden Fund was established by Government in 1994 as the Basic Science Fund to fund 'pure' research not covered by the PGSF, and since 1995 has been administered by the Royal Society of New Zealand. Other sources of funding included the New Economy Research Fund, aimed at new high technology businesses, and the Agricultural and Marketing Research and Development Trust (AGMARDT), established 1987, which currently has some $2.5m for the support of agricultural research.

[6] This fund is now known as the Public Good Science and Technology Fund.
[7] *NZOYB 2000*, p. 346.

These major changes in the University's environment made it increasingly important for the Faculty to maintain the relevance of its courses, to attract and retain students, and to attract adequate research funding, a higher proportion of which was to come from industry sources in this period.

Changes to Academic Programmes

Frequent adjustments were made to the contents of agricultural and horticultural programmes offered during the 1980s and 90s to ensure they were continuing to meet the needs of the sector. For example:

- Horticultural degrees were restructured in the late 1980s. The first-year science intermediate courses were dropped, and the four-year BHort degree was structured round a core of 32 compulsory units, including a 'Capstone' paper, to which were added 'concentration units' and 'elective units'. A fourth year of study led to an honours degree, with endorsements in business, science or technology (BHortBus, BHortSc and BHortTech). Objectives were increased flexibility and integration of subjects, and the training of more adaptable graduates, skilled at acquiring new knowledge in an evolving environment, and with increased business and marketing skills to equip them better for horticultural enterprise. It was also intended that these degrees should be offered extramurally as well as internally.
- In recognition of the growing interest in organic farming, and to give students an understanding of the differences between this and traditional farming methods, a new paper on organic farming systems was available from 1989.
- A Postgraduate Diploma in Rural Studies became available in 1989, and was first offered extramurally in 1990. This was a one-year course aimed at

Professor Peter Wilson was honoured with a personal chair for his work on deer, 2001.

Milking sheep, 1989.

Sir Alan Stewart.

> As a class we went on a farm trip to the Massey Tuapaka Farm; it's a hill country farm. They hired the army to take us to the top in their four-wheel-drive trucks but the trucks got stuck half way up and went down the bank, and we all had to jump out of the truck because we thought it might roll. So that was entertaining for the class.
>
> *Student, 1990s*

those wishing to update their qualifications without committing to a full degree course, and candidates were able to develop their own personal course of study from a wide range of options university-wide; it has proved popular, especially with those studying extramurally.

However, the most radical change to academic courses was that made as a response to the need for the Faculty to attract and retain more students. It clearly needed to reposition itself if it was to do this. Concerns at both the dropping student numbers, especially of new entrants, and the need to meet the changing needs of the sector, were expressed from 1986, and the Faculty undertook a major promotion and public relations campaign to redress the poor image of the land-based industries in young people's minds and to encourage more to enrol. More importantly, in 1991 it started radically reviewing its undergraduate offerings.

As a result of this review it was proposed in 1993 that a single three-year degree, the Bachelor of Applied Science (BApplSc) would replace the four existing degrees (BAgrSc, BAgr, BHort, and BAgrEcon).[8] The new degree was intended to give students more choice of papers, greater flexibility to change course midstream, and a greater chance to do papers from other faculties,[9] as well as rationalising resources and staff time. In addition, it placed more emphasis on agribusiness and agricultural industries generally, not just 'farming', to equip students better for jobs in the wider agricultural sector. Specific applied science papers replaced first-year science papers for the majority, but in general the new degree involved a rearrangement of existing papers. Among the seven compulsory papers there were a paper in communications, and a new 'Capstone' paper, designed to encourage students to work with others in a team framework to solve real-life

[8] One practical reason for making it a three-year degree was that the then student allowance, 'study right', only applied for three years.
[9] Students were initially required to take one paper from the Social Sciences or Humanities Faculties, but this requirement was dropped from 1998.

problems. The BApplSc could initially be taken with endorsement in agriculture, horticulture or natural resource management, the latter recognising the growing importance of environmental studies. Students opting for endorsement would graduate with a general, broad-based degree, whereas those opting for a more specialised degree could major in either animal science, rural valuation and management or landscape management. A new endorsement, international, was available in 1996. Additional majors were developed in subsequent years, including plant science (1995), agribusiness (1995), rural valuation and management (1997), agricultural engineering (1998), and equine studies (2002). By 2001 the number of compulsory papers required for the endorsements was increased, resulting in somewhat less freedom of choice for students.

There was some opposition from other faculties to the name of the degree, on the grounds that other applied science courses were taught at the University, and no one faculty should have exclusive rights to the term 'applied science'.[10] Some members of the Faculty of Agricultural and Horticultural Sciences had concerns about the word 'agriculture' being dropped from the name of the degree. Approval was given, however, and the new degree was offered from 1994. No new enrolments were accepted in the earlier degrees, but those already enrolled were permitted to finish. By 1997 the BApplSc was the only undergraduate degree in agriculture and horticulture listed in the *Calendar*.

Clearly the Faculty was taking a risk in moving to a more generic degree, and considerable effort was put into marketing the new offerings. It appeared that the desired result had been achieved, since the slide in enrolments was halted, and overseas tertiary institutions expressed interest in how the degree was structured, with a view

SIR ALAN STEWART

Sir Alan Stewart has made an enormous contribution to Massey, as a student, a lecturer, Principal and later Vice-Chancellor, and he ranks as one of the institution's most illustrious alumni. He completed a BAgrSc in 1939, and MAgrSc with first class honours in 1940, serving as President of the Students' Association 1938–9, and Captain of the Rugby Club 1939–40.

Following war service in the Royal Navy he attended University College Oxford as one of only three Rhodes Scholars from Massey, gaining a DPhil in 1949 for a thesis on selection in pedigree dairy shorthorns, as well as a blue for rugby. He then returned to Massey as a Senior Lecturer in the Dairy Husbandry Department.

After four years he took up an appointment in London with the Milk Marketing Board of England and Wales, and five years later was appointed Principal of Massey Agricultural College in 1959. He steered the College ably through the merger with the Palmerston North University College and its metamorphosis into an autonomous eight-faculty university. His considerable administrative skills were evident as he presided over the massive expansion and building programme of the 1960s and 1970s, and his vision is responsible for many of Massey's unique qualities, including its wide-ranging extramural programmes. Not only did he carefully husband the Uuniversity's financial resources, he also made sure that the natural resources of the campus were well preserved, and took great interest in the plantings and bird life.

He received a CBE in 1972, a Fellowship of the New Zealand Institute of Agricultural Science in 1977, and a knighthood in 1981. He retired in 1983 to a one–acre section near Whakatane. Massey awarded him an Honorary Doctorate in 1984.

[10] Interestingly, the 1926 New Zealand Agricultural College Act referred to "Higher Education and Research in Agriculture and the Applied Sciences".

to following a similar path. However, it was recognised that the BApplSc did not necessarily provide as strong a science background as did the former BAgrSc and BHortSc degrees, and was not producing the agricultural and horticultural scientists of the future. In 2000 BSc majors in agricultural science, horticultural science and animal science were therefore introduced.

Postgraduate programmes were also redesigned as a logical extension of the new undergraduate degree. A Bachelor of Applied Science with Honours was listed in the 1995 *Calendar*, with a choice of 17 specialisations. New postgraduate programmes included a Master of Applied Economics, developed in association with the School of Applied and International Economics (1995), and a new range of majors for the Master of Applied Science. A post-graduate Diploma in Maori Resource Development, taught jointly by staff in several faculties, was introduced in 1998 to provide a Maori perspective on the development of land-based resources.

There were also substantial moves to extramural teaching. Some papers for the BAgrEcon had been available extramurally since the late 1970s; in 1983 an introductory horticulture paper was added to the extramural offerings, and in 1984 another horticulture paper, one in soil science and one in wool handling. By 1989 selected papers for five faculty qualifications could be studied extramurally, and in 1994 elective papers for the BApplSc were added. By 2001 students could complete a whole degree in agriculture extramurally, and in 1996 the Soil Science Department had the distinction of delivering the first Massey extramural paper taught fully through the internet.

Compared with degree courses, the certificate and diploma courses remained relatively unchanged. Enrolments for individual internal courses have fluctuated, generally at a lower level than in the 1960s and 1970s, but the availability of some of these courses extramurally has maintained a healthy level of total enrolments. The Diploma in Agriculture was revised and updated for the 1985 intake. A Certificate in Wool Handling Systems was introduced in 1984, and a Certificate in Agricultural Engineering (extramural) offered for the first time in 1992. The Diploma in Horticulture was replace in 1996 by a Certificate in Horticulture, designed mainly for extramural students. The Diploma in Wool, and the two Certificates in Wool, have been available only at Lincoln University since 1999, and Massey's extramural Certificate is being picked up by WoolPro, a subsidiary of the Wool Board, using some Massey facilities.

Changes to Academic Structures

Several changes to departmental structures took place during the 1980s and 1990s, for example:

- In 1982 the Departments of Dairy, Sheep and Poultry Husbandry merged to become the Department of Animal Science.
- In 1985 the Department of Agricultural Economics and Farm Management split into two: the Department of Agricultural and Horticultural Systems Management, and that of Agricultural Economics and Business. Reasons for this included raising the profile of both disciplines. In 1994 Agricultural Economics and Business, together with the University's Department of Economics, formed the School of Applied and International Economics, but still

maintained its teaching links with the Faculty.

- In 1986 the Department of Horticulture and Plant Health also split, forming the Departments of Horticultural Science and of Plant Health, a step that acknowledged the importance of plant health as a discipline in its own right. They merged again in 1992, taking in the Department of Agronomy to form the Department of Plant Science, and thereby provide better coordination and profile for the extensive capability in plant science that had evolved to that time. Environmental horticulture was included in this Department and was gradually evolving towards a concentration on landscape management. Also in 1992 the agricultural machinery group formerly attached to the Department of Agronomy merged with the Department of Agricultural Engineering.
- In 1992 the Department of Wool was incorporated into Animal Science.

The biggest and most radical structural change occurred in 1998, with the formation of colleges. The academic activities of the University had been for many years organised in eight faculties, each headed by a Dean.[11] The intention to move to a structure consisting of a smaller number of colleges, each headed by a Pro Vice-Chancellor, was signaled in 1996, following the appointment of Professor James McWha as Vice-Chancellor. The College of Education was formed in late 1996 when the University's Faculty of Education merged with the Palmerston North College of Education, and three more Colleges (Business, Sciences and Humanities/Social Sciences) were formed on 1.1.98.

The College of Sciences was the biggest of these; it took in 22 departments from the Faculties of Agricultural and

Former Departments that contributed to the College of Sciences:

Agricultural Engineering
Agricultural and Horticultural Systems Management
Animal Science
Biochemistry
Chemistry
Computer Science
Consumer Technology
Ecology
Food Technology
Information Systems
Mathematics
Microbiology and Genetics
Physics
Physiology and Anatomy
Plant Biology and Biotechnology
Plant Science
Process and Environmental Technology
Production Technology
Soil Science
Statistics
Veterinary Clinical Science
Veterinary Pathology and Public Health

Institutes of the College of Sciences:

Food, Nutrition and Human Health (IFNHH)
Fundamental Sciences
Technology and Engineering
Information Sciences and Technology
Molecular Biosciences
Natural Resources (INR)
Veterinary, Animal and Biomedical Sciences (IVABS)

[11] Nine faculties from 1994, when the Faculty of Information and Mathematical Sciences was formed.

Professor Robert Anderson

Research into apple storage.

Horticultural Sciences, Information and Mathematical Sciences, Science, Veterinary Science, and Technology, and created from them eight research-led institutes.[12]

The aims were to emphasise the commitment of the College to research, and to foster interdisciplinary and co-operative teaching and research. Staff from the animal-based disciplines of the former Faculty of Agricultural and Horticultural Sciences, for example, moved to IVABS, together with colleagues from the former Faculty of Veterinary Science, enhancing opportunities for closer co-operation. (This recalls the intentions of those who made the decision in 1959 to associate the planned veterinary school with agriculture rather than medicine.) Further aims were to forge stronger partnerships with industry, to provide the College with greater flexibility to adapt to change, and to use staff time more efficiently, important at a time of financial stringency to allow more time for research. The total staff numbers as at December 1997 were 455 scientific staff, and 285 general staff, and Professor Robert Anderson was appointed Pro Vice-Chancellor of the new College of Sciences.

These changes were not supported by all staff, and were the subject of some criticism, since it appeared from the institute names that the University had diminished its traditional commitment to the agricultural sector. This criticism was firmly rebutted by Professor Anderson, who argued that the academic activities of many of the institutes stood to have significant impact in a modernised agricultural sector. In 2001 an entity called 'Massey Agriculture' was established within the College of Sciences to be a coordinated focus for, and tangible evidence of, the University's ongoing commitment to agriculture. It has links with industry, with all the institutes and across the colleges to foster rapid communication and collaboration in agriculture-related research and extension activities, and constitutes a window into

[12] The Department of Agricultural Economics and Business moved to the College of Business.

agriculture at Massey for those in the industry. It is headed by a Director, currently Stuart Morriss, and governed by a Management Board comprising the Heads of the Institutes of Food, Nutrition and Human Health, Natural Resources and Veterinary, Animal and Biomedical Sciences, and chaired by the Pro Vice-Chancellor.

Change and Continuity in Farms, Research and Extension Activities

The University's farms have continued to support both teaching and research programmes, and extension activities; like the rest of the Faculty they underwent some major changes and innovations during the 1980s and 1990s.

A number of new areas were added to the farms:

- 1980: 56 ha were added to Tuapaka
- 1986: 20.7 ha were added to the Large Animal Teaching Unit on the Old West Road
- 1986: Jennersmead, near Bunnythorpe, was purchased (16.8 ha)
- 1987: Haurongo Block, off Old West Road purchased (37 ha), with a further 16 ha added in 2001, and another block added in 1990/91
- 1988: Perry Block purchased (58 ha).

Among the many innovations were:

- 1981: Massey became involved in the management of Limestone Downs, giving assistance with farm management and providing advice in a number of areas. This 3240-ha sheep and beef cattle property in the Waikato was developed by Charles Alma Baker in the 1920s and 30s, and after his death in 1941 was farmed to provide for his daughter. After her death in 1976 the executors of the

PROFESSOR ROBERT ANDERSON

Born in Australia 1947, he completed a 3-year Diploma at Dookie Agricultural College in Victoria and entered the BAgrSc at Massey, graduating in 1970 as a Massey Scholar and the recipient of the Sir James Wilson Prize. In 1969–70 he was President of MUSA, and became the first ever co-opted student member of Massey University Council.

A first-class Masters degree followed, together with a Lectureship in Sheep Husbandry in 1973. He then completed a PhD in animal breeding at Cornell University as a Fulbright Scholar in 1978. Returning to Massey, he became Professor and Head of the Department of Sheep Husbandry in 1980, then Head of the newly-founded Department of Animal Science in 1982. In 1985 he became Dean of the Faculty of Agricultural and Horticultural Sciences, and in 1997 Pro Vice-Chancellor of the College of Sciences.

He has served as a member of numerous external committees, boards and councils. He was awarded a Victorian College of Agriculture and Horticulture Centennial Medal in 1986 for contributions to the fields of biometrics and animal breeding and for services to education, and in 2000, the Royal Society of New Zealand Thomson Medal. The citation for this described him as 'a visionary leader who has been effective in building relationships between researchers and in developing the College of Sciences as a series of research-focussed networks.'

I am fortunate to have worked with a great many colleagues over the years who have dared to be innovative, especially during moments of challenge, of which there have been plenty.

Robert Anderson, 2000

estate established the C. Alma Baker Trust, with the objective of using farm profits to further the science of agriculture in all its aspects. Funds have been largely used for research and education, and the farm has been the venue for various research, teaching and extension functions. A 'New Zealand Committee' is responsible for the management of Limestone Downs, and for advising the UK-based Trustees on Limestone Downs and the disbursement of research awards. Since 1990, the Trust has allocated some $3 m. to agricultural research projects, and $1.3m for scholarships and bursaries.

- 1984: The orchards were relocated on the other side of Tennent Drive and modernised.
- 1987: In response to the growing interest in deer farming a Deer Research Unit was established, run by Animal Health Services, to succeed the smaller Deer Research Compound, itself established in 1980.
- 1990: A Ruminant Research Unit was formed from the Dairy Cattle Research Unit, Sheep and Beef Cattle Research Unit and Animal Physiology Unit. This was originally in association with the Department of Animal Science, and provided for both intensive and extensive study of stock, including specialised groups such as the identical twin herd of cows, and lines of sheep specially bred for particular characteristics.
- 1993: A Dry Stock Unit was formed on part of Keeble and some other University land, to provide opportunities for teaching, research and extension in cattle grazing systems, and demonstrate methods for profitably rearing replacement dairy heifers.
- 2000: Fruit Crops Unit initiated their rent-a-tree scheme. For a small fee (initially $25) a family can "rent" an apple tree, from which they can pick as much fruit as they like, and in the process learn about orchard husbandry. This has proved enormously popular, with 150 families involved in the first year.
- 2001: An organic farm was developed at the Dairy Cattle Research Unit.

The biggest change during the period has been a change in the management and administration of these farms. During the 1980s most of the farms and their associated research units were closely linked with academic departments. The University's Farm Committee was responsible for overall policy, with advisory committees consisting mainly of academic staff overseeing individual farms or units, and supervisors responsible for day-to day matters. An Assistant to the Vice-Chancellor, Farms, renamed in 1990 Director of Farm Services, was responsible for the commercial units.[13] While involvement of academic departments was desirable, because many of their bigger research projects made extensive use of the stock and facilities of those farms, teaching and other commitments meant staff had insufficient time to devote to overseeing the farms.

In August 1996 the Farm Committee was disestablished, and in 1997 Agricultural Services was formed, responsible to the University's Commercial Activities Group for all the farms except Limestone Downs, and all associated Research Units except Jennersmead, the Pasture and Crop Research Unit, the Fruit Crops Unit and the Large Animal Teaching Unit. Since then the farms have been run on more commercial lines, with a greater emphasis on economic objectives and cost-recovery.

[13] Kevin Lowe held this position 1983–90, succeeded by David Grant.

Academic staff have only been involved if they are conducting a research project with one of these units.

This change, together with the government policy changes outlined above, has had a major effect on the funding of research. When the farms and research units were attached to departments, research was subsidised by university resources, but now researchers have to rely much more on outside funding for their research, whether by carrying out research contracts for industry, or by applying to one of the funding bodies discussed above. Since academic staff are expected to devote a significant proportion of their time to research, and research outputs count as important factors for promotion, the issue of funding is crucial. Putting in bids to outside funding agencies, and arranging joint venture projects with other organizations, can be extremely time-consuming, especially since this is done mainly at the end of the academic year when staff are already busy marking, and university staffs are competing with those from Crown Research Institutes which have special staff to assist in this area. It is therefore greatly to the credit of staff that sufficient funding has been received to enable research to continue at a high level.[14]

The income of the Massey University Agricultural Research Foundation was used initially to fund small-scale research into new areas, which could establish a project's viability. By 1999 the Foundation had supported 128 projects, but was changing its focus to become a more pro-active research brokerage organisation, identifying specific industry research needs, and seeking outside sponsorship for them. It has been very successful in securing funding for Massey researchers.

Cows on Keeble Block were televised for the TV One programme Agri-Tech 2000, 1994.

Fruit Crops Unit, 1984.

[14] In 1993 the Faculty received outside funding to the value of $3.5m; in 1997 the figure was close to $5m. The College of Sciences received outside research funding of $18.9m in 2001.

Two of the identical twin heifer herd at the Dairy Cattle Research Unit.

Steve Maharey, MP for Palmerston North, shows great interest in the Maori potatoes (taewa) grown by INR staff, 2001.

Broad research areas over the past 20 years have included:

- International agricultural trade policy
- Agribusiness and markets
- National resource and environmental economics
- Agricultural development
- Agricultural machinery
- Building technology
- Post-harvest engineering
- Sustainable and renewable energies
- Tourism technology
- Water resource and waste management engineering
- Farm and horticultural management
- Rural development
- Agricultural systems
- Farm forestry
- Sheep research
- Deer research
- Dairy cattle research
- Beef cattle research
- Pig research
- Poultry research
- Animal genetics, reproduction, nutrition and physiology
- Food research in horticulture
- Integrated plant protection
- Landscape management, including cut flowers and ornamentals
- Pastoral science
- Seed and crop science, including the development of new crops and cultivars
- Pedology, quaternary and mineralogical studies
- Environmental studies
- Resource inventory and land use studies
- Soil physical properties, water management and solute transport
- Soil fertility, microbiology and nutrient cycling
- Fertilizer development, quality and agronomic evaluation

The University's specialised research centres have been involved in many of the Faculty's research programmes, and the vagaries of funding have been a major concern for

them too. The three main research centres at the start of the 1980s were the Pig Research Centre, the Poultry Research Centre and the Nursery Research Centre.

The Pig and Poultry Research Centres followed very similar paths in the 1980s, focussing their research on nutrition and metabolism. Both were funded by a combination of university, government and industry grants, and both suffered when the government grants were phased out between 1986 and 1988. In April 1989 the two Centres, together with the Small Animal Production Unit, came together to form the Monogastric Research Centre. While using existing buildings and facilities, resources were pooled and administration centralised, to increase efficiency and strengthen teaching, research and development work in non-ruminant livestock production. Dr Bill Smith, former Director of the Pig Research Centre, was its first Director, with a staff of 6 full-time equivalents. Dr Paul Moughan took over as Director in May 1991, and by April 1992 there were 13 staff positions. A further expansion took staff to 28.2 full-time equivalents by December 1994. Both pig and poultry research continued, with support from industry, and in 1995 a major dairy nutrition and health progamme, funded by the NZ Dairy Board, was established in the Centre. Since then there has been more emphasis on research involving humans.

Throughout the 1980s the Nursery Research Centre, under the direction of Murray Richards, continued its work on all aspects of nursery crop and cut flower production, funded by the New Zealand Nurserymen's Association and Government, as well as by the University. By 1990 the Centre was generating some of its income from seminars and royalty arrangements from the High Health plants developed in the 1980s. A new research complex, including 760^2 m. of greenhouse space, was

Dr. ERIC OJALA

Born 1916, he gained a BAgrSc at Massey in 1938. While there he served as Secretary then President of the Students' Association, and edited the 1937 edition of *Bleat*. MAgrSc followed in 1941, then after military service in the South Pacific, and while working as Agricultural Officer in the Solomon Islands, he gained a BA in economics. A British Council scholarship took him to Oxford, where he was awarded a DPhil in 1948 for research in international aspects of agricultural economics. His thesis was published by Oxford University Press in 1952 under the title *Agriculture and Economic Progress*.

After three years as Rural Economist in New Zealand's Department of Agriculture he was seconded to the South Pacific Commission at Noumea, where he directed its research activities. In 1956 he was appointed to the FAO of the United Nations, as Regional Economist for Asia and the Far East, transferring to the FAO headquarters in 1962. From 1970–1976 he was Assistant Director-General in charge of FAO's Economic and Social Policy Department.

On his retirement he returned to Massey as Senior Research Fellow in the Department of Agricultural Economics and Farm Management, and in 1981 was appointed the first Director of the Centre for Agricultural Policy Studies, continuing to work as a consultant after his retirement in 1984.

A steady stream of publications has included several major reports published by the Centre for Agricultural Policy Studies. Dr Ojala was awarded an Honorary DSc by Massey in 1977, the QSO in 1986, and the Sir Geoffrey Peren Distinguished Alumnus Award in 1988.

Dr Eric Ojala.

Professor Al Rae on the occasion of receiving his Massey Medal, 1990.

opened in 1987, but financial problems within the nursery industry led to the closure of the Centre in 1993.

The Centre for Agricultural Policy Studies was established in 1981 in association with the Department of Agricultural Economics and Farm Management. Its objectives were to conduct research, to consult and to facilitate activities related to international markets and policy developments affecting New Zealand's natural resource-based industries. The first Director was Dr Eric Ojala. On his retirement from the position as Director he continued to work as a consultant, Dr Allan Rae becoming Director. The Centre has been financed largely by external grants and contracts, and has published numerous research reports as well as sponsoring seminars and workshops, and offering consultancy services to government and business organisations. Its name was changed in 1995 to the Centre for Applied Economics and Policy Studies. Associated with the activities of the Centre is the Venture Trust, a charitable trust established by a very generous donation from Dr Ojala. Its funds are used particularly to bring the Centre's researchers into contact with overseas experts, giving priority to the international exchange of scholars and research data.

The Agricultural Machinery Research Centre was established in1982 with Dr John Baker as Director. In 1985 the Centre licensed the manufacture of a long-beam mole plough which it had developed. Merv Cross of the Department of Agronomy had earlier experimented with various seed-drilling machines. This was picked up by Dr Baker and his team, who developed a no-tillage, or direct-drilling, machine called Bio-Blade, which deposited seeds in a t-shaped slot in the soil. It minimised the risk of erosion, a big problem in the United States, because the soil was not disturbed and loosened by ploughing. The University's attempts to have this promising

technology manufactured and marketed by a United States company were fraught with problems, and in 1995 all rights were purchased by a New Zealand company. The Centre was closed in 1991.

In 1983 the Fertilizer and Lime Research Centre was formed as part of the Department of Soil Science, as a medium through which staff in the Department could conduct their research. Many research contracts for industry and government bodies have been carried out, and its extension activities have included regular workshops and training courses. The first Director was Professor Keith Syers, followed in 1986 by Professor Robert White, in 1992 by Professor Russell Tillman, and in 2000 by Associate Professor Mike Hedley.

The Centre for Postharvest and Refrigeration Research, established in 1994, formalised research co-operation between staff from five departments in the Faculties of Agricultural and Horticultural Sciences and Technology. Professor Nigel Banks was the first Director. Research areas have included meat chilling and freezing, milk cooling, and the packaging, transport and storage of horticultural products. At the time of writing the Centre is effectively in recess, though research is still active, mainly involving the Fresh Technologies group within the Institute of Food, Nutrition and Human Health.

Two recently formed research centres make particularly intensive use of up to date computer technology. The Epicentre, set up in 2000 within the Institute of Veterinary, Animal and Biomedical Sciences under the direction of Professor Roger Morris, carries out wide-ranging epidemiological research, and is respected worldwide for its development and application of animal health software. Its EpiMAN animal and disease modeling software proved its worth during the UK's

PROFESSOR AL (ALEXANDER) RAE

Professor Rae's formal connection with Massey spanned 46 years, from his arrival as a BAgrSc student in 1942 to his retirement in 1988. He gained MAgrSc with first class honours while working as a junior lecturer in sheep husbandry, then a PhD at Iowa State University.

Appointed to Massey's foundation Chair in Sheep Husbandry in 1951 at the unusually early age of 27, under his leadership the Department gained international acclaim for teaching and research in sheep and beef cattle husbandry. He played a prominent role in the transformation of Massey Agricultural College into a multi-faculty university, and as an administrator was known for his ability to see the big picture and identify the real problem at hand.

Service in positions outside Massey has included time as Chairman of the World Congress on Sheep and Beef Cattle Breeding, as a member of the National Research Advisory Council Primary Production Committee, and as Advisory Director of the Drysdale Carpet Wool Co-operative Company Ltd. However, he never let this work get in the way of his research, which involved application of the principles of quantitative genetics to the improvement of animals. His work had its foundation in a famous Massey flock, the randomly bred CPT flock.

Recognition of Al Rae's stature has included an OBE, a CNZM, a Massey Medal, Fellowship of the Royal Society of New Zealand (the first Massey staff member to achieve such an honour), Life Membership of the New Zealand Society of Animal Production, and a Fellowship of the New Zealand Institute of Agricultural Science. A special symposium on animal breeding and genetics was organised in his honour by the Department of Animal Science and the New Zealand Animal Breeding Trust. He is now an Emeritus Professor of the University, and continues to be involved with university activities.

New students are warned of dangers on campus in *The Student Handbook 2002*:

Massey University has a number of landmarks, jewels, and hidden features.

The vet pond is one of Massey's largest landmarks, though not nearly as impressive as the lagoon opposite the Hokowhitu campus, it certainly is pretty. On a good day, you could even see large carp swimming about in it, or at least some very fat (perhaps genetically engineered) goldfish. Alas, it's been ages since we've seen any. No doubt they were eaten by hungry students, who at dinner were left with 'the vegetarian alternative' that even the vegetarians don't want to eat. Such is life.

This massive body of water is home to the black swans, Massey's resident villains. It is a crime to commit acts of assault against others, but somehow, the swans aren't aware of this. Steer clear, especially when their cygnets are around. That hissing isn't just the parking man letting air out of your tyres, it's the black-winged harpy out to get a piece of you! You've been warned…

On the topic of parking, we couldn't forget to mention the Gravel Pit now could we? This is the largest carpark at Massey, and the only man-made structure besides the Great Wall of China to be visible from the moon. Parking here isn't great and it's not that good for your car either. But it's all you've got really, and it is better than nothing. Just watch the mud patches on wet days – which in Palmerston North is nearly every day. You've been warned…

Students in the Horticultural Enterprises paper learn the business side of horticulture at a Palmerston North flower shop, 1993.

2001 foot and mouth outbreak, predicting the course of the disease with uncanny accuracy. The software can also be used to trace an epidemic back to its likely source.

The New Zealand Centre for Precision Agriculture, established 1999, is using Geographic Information Systems (GIS) and Global Positioning Systems (GPS) for a wide range of commercial agricultural and resource management applications. One example is a satellite-tracking programme for wildlife. Another is an electromagnetic sensor together with Real Time Kinematic Differential GPS, which simply by being driven over the ground maps data on several important properties of the underlying soil. This quick, non-invasive, survey method facilitates targeted and economic use of irrigation and fertilisers, and is proving especially popular with vineyard owners.

Extension activities were just as important to the Faculty as in earlier periods. Dairy Farmers' Conferences continued to be held annually, and the proceedings published as the *Dairyfarming Annual*. A wide range of short courses and seminars were presented by all departments on such diverse topics as wools for spinning, introductory shearing, beekeeping for beginners, deer farming, rural land use, asparagus, and orchid culture. Some of the major agricultural conferences held at Massey included:

- World Congress on Sheep and Cattle Breeding, 1980. As well as the technical sessions at Massey, delegates visited shows, farms and research stations. The Chairman of the Organising Committee was Professor Al Rae, and proceedings were published in 2 volumes in 1982, edited by Bob Barton and Dr Bill Smith.
- 56th ANZAAS Conference 1987: Science in a changing society.
- 17th International Grasslands Congress, 1993 was at Massey for its first five days.
- Symposium on Animal Breeding and

Genetics in Honour of the 70th Birthday of A.L. Rae, 1993.

The Faculty continued to participate in field days, and in 1996 won first prize in its section at the Mystery Creek field day. The theme, 'Getting the right mix', matched the overall field day emphasis on soil, and the display featured a large worm wearing a trencher, which attracted many potential students into the marquee. Riverside Farm held an open day in February 1981, and 70 farmers walked over Keeble Farm at its open day in 1982.

The Drainage Extension Service continued to be involved in the design and development of on-farm drainage systems, though the demand for its services did diminish temporarily during the rural recession of the 1980s, necessitating a review of its activities. The service carried out a major project for the Department of Lands and Survey (now Landcorp) at its Moutoa Station, started by Derm Bowler in 1981 and completed 1996.

In 1980 the Seed Technology Centre produced a 20-minute film on its study programmes to show part of New Zealand's aid programme in food production to the rest of the world. This did not prevent the Ministry of Foreign Affairs threatening to withdraw its funding in the 1980s, and shifting its funding emphasis from certificate programmes to postgraduates. Since by 1990 30 of the Centre's 35 students were postgraduates, and financial support was uncertain, it was absorbed into the Department of Plant Science and its staff became involved in mainstream teaching, while continuing to carry out research projects and maintaining overseas links. It is now called the Centre for Plant Reproduction and Seed Technology.

The Centre for Veterinary and Agricultural Continuing Education, established 1999, is linked with IVABS, and responsible to

The Fitz was a big part of our life, because whenever we went out on field trips we were picked up and dropped off there.... In our postgraduate years we were able to join a group called ASGAS (the Animal Science Guinness Appreciation Society) and we met once a month at the Celtic Inn, with lecturers, postgrads, farm staff, etc. There was also a group called ASWACAS (Animal Science Wine And Cheese Appreciation Society) which was just postgrad students....In order for those doing the Capstone paper to get to know each other better we decided we should go on a pub crawl, and organized the Capstone Crawl. About 200 people went, we had tee shirts made up, Lion Red sponsored us, we went to six different bars and got a half-price drink at each. We had an awesome time and met so many different people.

(Student, 1990s)

The agricultural influence is still evident on campus, as this excerpt from the *MUSA 2002 Student Diary* shows.

THE WOOLSHED and Social Hall
Student Baa – On campus

The Woolshed is your on-campus bar run by Campus Arts through MUSA. Our aim is to provide a venue that caters for student needs .... The Woolshed is situated behind the rec-centre ...

> Massey is a good place to work and be a student. It has great facilities in terms of the farms, all close. There's a variety of farms: sheep and beef, a deer farm and plenty of dairy farms. They help with both theory and practical teaching.
>
> *(Student, 1990s)*

The wind turbine was installed on the Centre for Energy Research's Renewable Energy testing site on campus in 1993, partly funded by the British High Commission. Research involves looking at ways to match local energy supply to meet remote rural community needs, thus reducing dependence on supplies through the national grid.

the Director of Massey Agriculture. Its role is the coordination of the design, delivery and evaluation of workshops and short courses for practising veterinarians and farmers. These self-contained courses can be held in any local community, literally taking Massey's skills out into the field.

Overseas extension activities flourished, as numerous staff continued to form links with overseas institutions, both to market the University, and to act as consultants. Particularly notable has been the on-going work of Professor Alex Chu, himself a former Colombo Plan student at Massey. His visits to China have been important in building Massey's reputation there, and he was International Coordinator of the Guizhou/UNDP Agro-grasslands project. By improving small-holders' pasture quality the project increased average annual gross income per household from 50 yen in 1989 to 968 yen in 1992. Professor Chu's contribution to the agricultural development and agricultural education in China culminated in him receiving the highest award the Chinese Government gives to a foreigner — the State Friendship Award in October 2001. This Award reflects the huge contribution Massey University has made towards China's economic development over the years.

Changes to Buildings

During the 1980s there were some alterations to the Agricultural Engineering Block, and the A & B Blocks, to provide additional staff accommodation, and also additions and alterations to various research centre buildings and the Plant Growth Facilities.

The Practical Teaching Complex was the only new building for agriculture in this period. Planning for it started in 1979, plans and specifications were drawn up in 1985, and it was completed early in 1987.

It originally housed the Agricultural Machinery Research Centre, with facilities for both research and teaching, together with a field laboratory for practical classes and research in pasture work, and a covered area for animal teaching and demonstrations. There is still a machinery hall, and lecture room, but the other occupants are now the landscape management staff of the Institute of Natural Resources, and some staff from the Institute of Food, Nutrition and Human Health.

The creation of the College of Sciences and subsequent redistribution of staff through the seven institutes has meant changes of location for many staff. The Wool Building, for example, now houses the Epicentre, and staff of the former Department of Animal Science are now in the Veterinary Tower Block. Over the summer of 2001/2002 internal alterations were made in the Agricultural and Horticultural Sciences Building the better to accommodate some of these changes.

Student Life

So how did all the changes of this period impact on students?

Students, no less than staff, were challenged by many changes. They were affected at a very basic level by the reduction in financial support for their studies. Those studying in the 1980s had a certain level of financial security, paying little in fees and receiving living allowances from the Government, but by the 1990s fees had risen, and living allowances were rare. Most students relied on student loans and part-time paid work by then, and expectations of employment after graduation were perhaps not quite as high as previously. Individual student situations varied widely, but stories of financial hardship among students are not uncommon, for example of students surviving mainly on porridge, and living in unheated or substandard housing, conditions not conducive to either their health or their ability to study well.

It would be interesting to know how many students have been discouraged from university study by the prospect of financial difficulty. Certainly anecdotal evidence suggests that many students are putting more effort into their study to ensure they gain their qualifications in as short a time as possible, and some are deliberately choosing qualifications such as business degrees that will ensure a well-paid job following graduation.

Changes to the academic year and to assessment processes have also affected the way students study. Following lengthy discussions, the University changed in 1994 from a three-term year to a system of two thirteen-week teaching semesters, with provision for a third semester in the summer. This meant that papers could either be offered as full-year, double-semester papers, with exams at the end of the second semester, or as more intensive single-semester papers, with exams at the end of the semester. Papers in the Faculty were initially mainly double-semester, but there has been a gradual shift to more single-semester papers, especially at the undergraduate level. A system of continuous assessment, by which regular tests and assignments count more towards a student's grades than end-of-year examinations, was introduced gradually from the 1970s. This was largely at the request of students, to minimise end-of-year exam stress. While contact hours are now slightly less, they have been replaced by more assignments, including group assignments, and regular tests. The result is that students have to apply themselves steadily throughout the year, with less chance to catch up if they fall behind. As earlier

Dairy Cattle Research Unit staff, Zarah Smith and Graham McCool, try natural methods of fly protection for the organic herd, 2002. *(© Guardian)*

predicted by Dr Alan Stewart, it has made students' lives more pressured. The structure of the BApplSc may also contribute to a sense of pressure, since it aims to cover a wide field in three years.

One noticeable change amongst students has been the steady increase in the percentage of women studying in the Faculty. In 1974 women made up only 4% of those completing the BAgrSc, BAg, BHort and BHortSc degrees; by 1983 this figure was 29%, and in 1990 39%. In 2000 41% of those completing the BApplSc were women. Women students have commented that although they were in a minority, and the Faculty has always been a rather masculine world, they have not encountered any real problems either in discrimination or in dealing with the physical nature of the work.

Despite academic pressures, students continued to have a busy social life, centred round the class group, the sports field and the pub, with occasional parties or barbecues at student flats, or trips away for a twenty-first celebration. The structure of the BApplSc degree means students in a particular year are not together for as many classes as under the BAgrSc, but students from the Faculty still tend to socialise together, and have a strong sense of community. Although sadly those great Massey institutions *Bleat* and Procesh no longer exist, the old Massey Agricultural College days have left an abiding legacy.

— *Lucy Marsden*

Massey's prize-winning display at Mystery Creek field day, 1996.

AFTERWORD:

The Rutherford Memorial, on the site of Ernest Rutherford's birth in 1871 at Brightwater, near Nelson, bears the following inscription:

"This site is a tribute to one who rose from humble beginnings in rural New Zealand to world eminence. It is also to show New Zealand children that they too can aspire to great heights."

This is a profoundly inspirational statement and although the context is different, it is appropriate to suggest that the words "rose from humble beginnings in rural New Zealand to world eminence", are an apt reflection of the agricultural and horticultural 'story' at Massey University over the past 75 years.

As this book has recorded, all that Massey University is today arose from the vision and commitment of the enlightened Professors Peren and Riddet who, with assistance of such far-sighted men of the land as Sir James Wilson of Rangitikei, chose the banks of the Manawatu River in Palmerston North as its birthplace. Seventy-five years on, what was once an agricultural college in rural New Zealand is now a complex multi-campus university that, in terms of student numbers, is the country's largest. The achievements of its staff and graduates, not just in New Zealand, but worldwide, have been outstanding. Despite having broadened its focus well beyond agriculture and horticulture during the past three decades, Massey University's name remains synonymous with excellence in agriculture and the related disciplines. As recently as 1994, the then Vice-Chancellor of the Univ ersity of Melbourne identified Massey University as being one of the two international benchmark institutions in agricultural education and research in the Southern Hemisphere. This is no mean achievement, and is largely due to the combination of vision and 'can do' attitude described in this history, which is still one of Massey's strengths.

Massey's historical willingness to update and modify itself has been another key to its ongoing success, and it is a tangible expression of its commitment to the advancement of agriculture. Thus, in the same way that the wider agricultural sector continues to undergo change, so too will those leading-edge institutions, such as Massey, upon which the progress of the sector ultimately depends. As Massey University looks forward to celebrating its centenary in 2027, there is therefore nothing more certain than that further organizational development and change is inevitable. However, we can all confidently expect the words *Floreat Agricultura* to be just as meaningful and motivating in the future as they are now. The 'mission' of Peren and Riddet is alive and well.

— *Robert Anderson*

PRIMARY SOURCES

Massey University Archives

Unpublished

Anderson, Robert, *Changes and Challenges: Speech presented at the Massey University Faculty of Agricultural and Horticultural Sciences Hexa-Decade Reunion, 11–13 November, 1988.*

Documents of Agricultural and Horticultural Sciences Faculty Board, 1962–1994, 2.2/2/1.

Documents of Fertilizer and Lime Research Centre Advisory Committee, 1984–1990, 3.3/15/1.

Documents of Massey Jubilee, 1977.

Documents of Massey Agricultural College and Massey University Council, 1928–1999, 1.2/1/1.

Documents of Massey University Farm Committee, 1980–1996, 1.2/1/5.

Documents of New Zealand Nursery Research Centre Advisory Committee, 1980–91, 3.3/23/1.

Minutes of Massey Agricultural College Council and Standing Committee, 1945–46.

Newspaper Clippings, 1924–1988, 1996–2002, 5.2/1–2.

Oral History Tapes, 5.4.

Photograph Collection, 5.1/1/1.

Vice-Chancellor's Correspondence, 1958–1994, 1.1/1/1–5.

Published

Annual Reports of Massey University Agricultural Research Foundation, 1977–2001.

Bleat, 1931–59, Massey Agricultural College Students' Association.

Chaff, Selected copies, 1935–59, Massey University Students' Association.

Dairy Husbandry Research 1927–77, Massey University, 1978.

Massey News, 1980–2002.

Massey University Agricultural and Horticultural Sciences Research and Extension Report, 1995–1996: Projects, Publications and Extension Activities.

Massey University Annual Report, 1960–80, 1988–1999.

Massey University Calendar, 1928–2002.

Massey University College of Business: The First Twenty Five Years, Massey University, 1997.

Masskerade, 1946–59, Massey Agricultural College Students' Association.

Ridler, B.J., *No. 4 Dairy Farm: A Review of the Early Years 1973–1978,* No. 4 Dairy Farm Publication No. 1, Massey University.

Twenty-Five Years at the Dairy Cattle Research Unit 1959–84, DCRU Publication No. 1, Massey University, 1985.

Secondary Sources

The Asia Connection: Massey University and Asia, Palmerston North, Massey University, 1996.

Brooking, Tom, *Massey, Its Early Years: A History of the Development of Massey Agricultural College to 1943,* Palmerston North: Massey Alumni Association, 1977.

Courtney, Lesley, 'A Feminine Enrolment: Recovering Women Students of Massey Agricultural College 1932–63', BA(Hons) Research Exercise, Massey University, 2000.

Dictionary of New Zealand Biography, vol. 4, 1921–1940, Wellington, Allen & Unwin/Department of Internal Affairs, 1990–

Fairweather, John R., *Agrarian Restructuring in New Zealand,* Canterbury, Agribusiness and Economics Research Unit, Lincoln University, 1992.

Farming Without Subsidies: New Zealand's Recent Experience, Roy Sandry & Russell Reynolds (eds), Wellington, MAFF/GP Books, 1990.

The New Zealand Economy: Issues and Policies, Stuart Birks & Srikanta Chatterjee (eds), 3d ed., Palmerston North, Dunmore Press, 1997.

New Zealand Official Yearbook, 1990, 2000.

OECD Economic Surveys: New Zealand, 1990/91, Paris, OECD, 1991.

Chairmen of the Council of Massey Agricultural College

The Hon. Sir George Fowlds, CBE	1927–1934
Sir William Perry	1934–1935
Sir Thomas Hunter, KBE	1936–1938
Arthur Morton	1938–1942
G. Grey Campbell	1943
R.A. Candy, OBE	1944–1946
A E. Mansford, OBE	1947
W.V. Dyer, CBE	1947–1959
E.D. Holt, JP	1960–1962

Chancellors of Massey University

J.C. Andrews, MSc, PhD, FRIC, FNZIC	1963–1966
The Hon. W.B. Tennent, JP, BDS	1967–1970
The Hon. L.W. Gandar, JP, BSc	1970–1975
Sir Arthur Ward, KBE, ACA, FNZIAS	1976–1980
L R. Wallace, CBE, MAgrSc, PhD, FNZIAS, FRSNZ	1981–1984
J.D. Easton, Dip Agr	1985–1990
Hon Justice J.H. Williams, QC, LLM, FCI Arb	1991–1997
M.O. Croxson, CBE, BMus, MPhil, FTCL, LRSM, LGSM	1998–

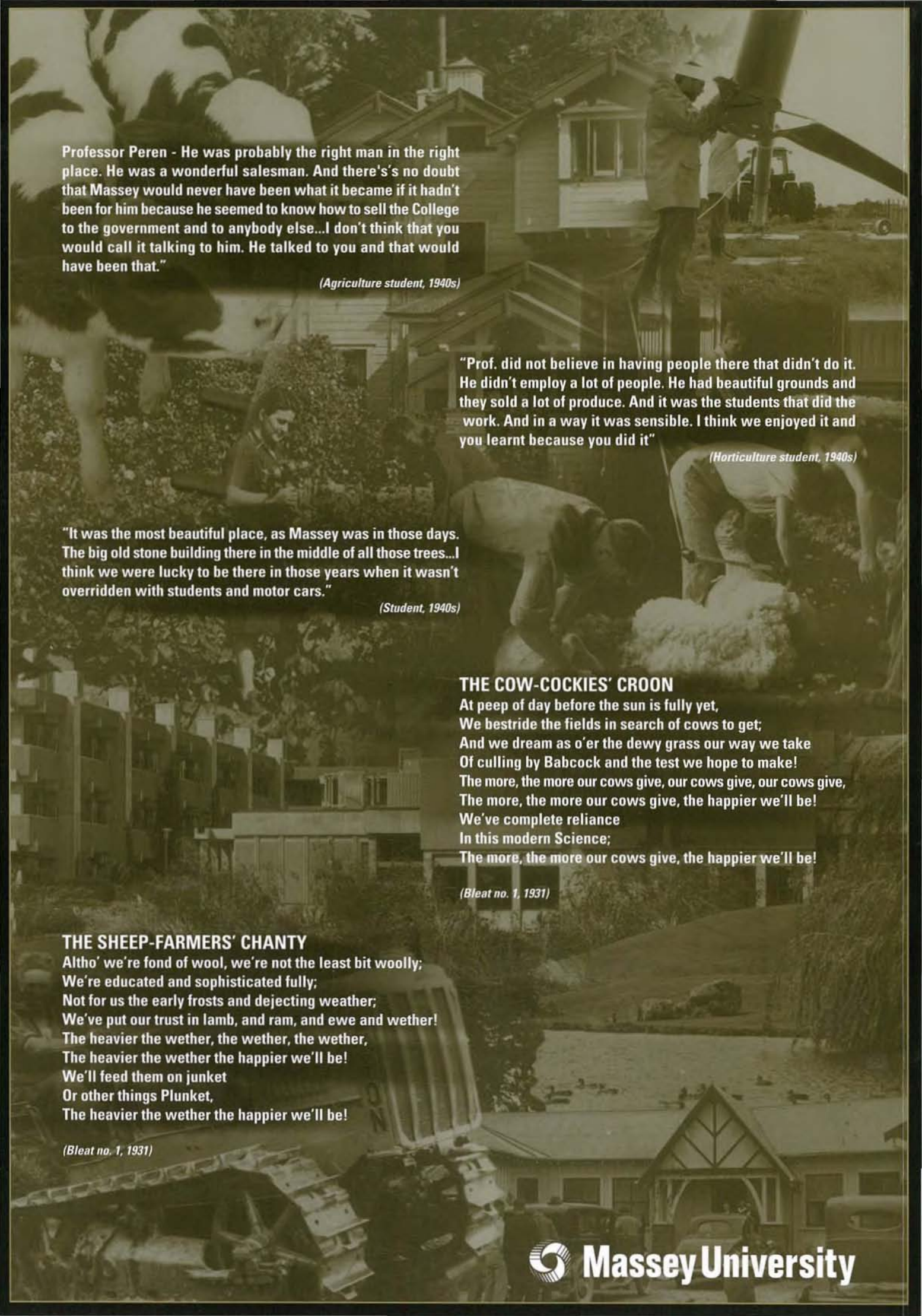
Principals and Vice-Chancellors

Sir Geoffrey Peren, KBE, Croix de Guerre, BSA	1927–1958
Sir Alan Stewart, KBE, MAgrSc, DPhil, FNZIAS	1959–1983
Sir Neil Waters, MSc, PhD, DSc	1983–1995
Professor James McWha, BSc, BAgr(Hons), PhD	1995–2002

Deans of the Faculty of Agricultural and Horticultural Sciences

Professor I.L. Campbell, BAgrSc, PhD, FNZIAS	1962–1977
Professor A.R. Frampton, MAgrSc,PhD	1977–1983
Professor B.R. Watkin, MAgrSc, PhD	1984
Professor R. Anderson, MAgrSc, PhD	1985–1997

(Since 1997 Pro Vice-Chancellor of the College of Sciences)



Professor Peren - He was probably the right man in the right place. He was a wonderful salesman. And there's's no doubt that Massey would never have been what it became if it hadn't been for him because he seemed to know how to sell the College to the government and to anybody else...I don't think that you would call it talking to him. He talked to you and that would have been that."

(Agriculture student, 1940s)

"Prof. did not believe in having people there that didn't do it. He didn't employ a lot of people. He had beautiful grounds and they sold a lot of produce. And it was the students that did the work. And in a way it was sensible. I think we enjoyed it and you learnt because you did it"

(Horticulture student, 1940s)

"It was the most beautiful place, as Massey was in those days. The big old stone building there in the middle of all those trees...I think we were lucky to be there in those years when it wasn't overridden with students and motor cars."

(Student, 1940s)

THE COW-COCKIES' CROON

At peep of day before the sun is fully yet,
We bestride the fields in search of cows to get;
And we dream as o'er the dewy grass our way we take
Of culling by Babcock and the test we hope to make!
The more, the more our cows give, our cows give, our cows give,
The more, the more our cows give, the happier we'll be!
We've complete reliance
In this modern Science;
The more, the more our cows give, the happier we'll be!

(Bleat no. 1, 1931)

THE SHEEP-FARMERS' CHANTY

Altho' we're fond of wool, we're not the least bit woolly;
We're educated and sophisticated fully;
Not for us the early frosts and dejecting weather;
We've put our trust in lamb, and ram, and ewe and wether!
The heavier the wether, the wether, the wether,
The heavier the wether the happier we'll be!
We'll feed them on junket
Or other things Plunket,
The heavier the wether the happier we'll be!

(Bleat no. 1, 1931)

Massey University