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## *Memorial Address*

WILLIAM RIDDET, OF MASSEY

I. L. CAMPBELL

*Massey University, Palmerston North*

IN 1946, this Society instituted a series of Memorial Addresses with the twin purposes of honouring distinguished men in the field of animal production and placing on record their achievements against the backdrop of their times.

During the period 1946 to 1956, ten men have been so honoured by the Society. They were:

Ernest Short of Parorangi  
Alfred Hyde Cockayne  
Grigg of Long Beach  
Bernard Cracroft Aston  
The Matthews of Wairongomai  
George Henry Holford  
John Anderson Gilruth  
Sir James Wilson of Bulls  
James Little  
William John Croucher

On this occasion we honour William Riddet, dairy scientist and educator, a foundation member and past president of this Society.

Although William Riddet spent the greater part of his life in New Zealand, no one was ever left in doubt as to his Scottish origin. He was born on March 16, 1896, in Dalry, Ayrshire, son of Robert Riddet, who was a quiet, kindly man, active in the public affairs of country, school and church, farming the land of Cubeside Farm as his father before him farmed it.

Young William Riddet was educated at the Dalry Higher Grade Public School and the Irvine Royal Academy, showing promise of the brilliant academic record which was to follow by being awarded the dux medal of the Dalry School in 1910.

He had an early introduction to practical farming. Cubeside was a mixed farm carrying pedigree Ayrshire cattle, sheep, pigs and horses, and growing a variety of crops. As a schoolboy, William was expected to carry a share of the work. Then, having completed his secondary schooling, he spent an extended period on the family farm before matricu-

lating as a dairying and agricultural student at the West of Scotland Agricultural College in April, 1914.

After completing one year's study at the College, he volunteered for war service. From May, 1915, to August, 1917, he was with the Royal Army Veterinary Corps and, until 1919, the Royal Scots Fusiliers. He saw active service on both the Eastern and Western Fronts and on demobilization held the rank of Captain.

A more mature, but, at 23, still young, William Riddet resumed his interrupted agricultural studies. He was a brilliant student. Dedicated to his work, with an eager, questing mind and a retentive memory, he was outstanding among the students of his group. During his College career he obtained first-class certificates and prizes in all his classes, and was awarded all medals and prizes open for competition, comprising two gold medals, three class medals and two memorial prizes. He qualified for the N.D.A. and N.D.D. diplomas, both with honours, and went on to graduate B.Sc.(Agric.) in 1923.

From 1921 until January, 1924, he held, at various times, the positions of Assistant Organiser for Renfrew and Dumbarton and Organiser for Ayr, being responsible for assisting in agricultural education and extension in these counties, and acted as itinerant milk recorder to the Arran Milk Record Society. His final appointment at the College was as lecturer in dairying in the Dairy School for Scotland, where he taught a wide range of dairying subjects and gained an introduction to research work in processing.

Little over a year later, William Riddet, at 29, was appointed in May, 1925, to the Logan Campbell Chair of Agriculture at Auckland University College.

#### EARLY YEARS IN NEW ZEALAND

Let us look briefly at the New Zealand stage on which the newly appointed Professor was about to play his part in agricultural education.

Lincoln College, established in 1880, had been providing agricultural courses strongly biased toward practical agricultural work. In the early 1920s a three-year course leading to the degree B. Agr. was being offered, but few students availed themselves of it. At this time certain departments of state, including Agriculture and Education, and some farming leaders and other public men were becoming increasingly aware of the need for a greater number of more adequately trained agriculturists to serve the rapidly



WILLIAM RIDDET

expanding primary industries of New Zealand. Various investigating boards, committees and commissions were set up to report to Government and the University Senate. In turn, the Richardson Commission (1923), the Board of Agriculture Commission (1925) and the Royal Commission on University Education in New Zealand (1925) agreed on the inadequacies of the Lincoln degree course, but differed in the remedial action recommended.

Meantime, in February, 1925, a "School" of Agriculture was established at Victoria University College following an endowment of £10,000 for a Chair by Sir Walter Buchanan and the appointment of Professor Peren to it. Of the School, Professor Peren reported to the Royal Commission: "The permanent staff consists only of myself, but lectures are also being given by three members of the Biological Laboratory of the Department of Agriculture. At present we have neither lecture rooms nor laboratories. We have neither land nor livestock, and must surely constitute one of the most extraordinary Schools of Agriculture which ever accepted students. . . ." The Logan Campbell bequest of £20,000, which brought Professor Riddet to this country, created a similar situation in Auckland.

The Royal Commission contended that any attempt to maintain three University Schools of Agriculture would doom each to "anaemic mediocrity" and recommended the establishment of an Agricultural College in association with the University in some suitable locality in the North Island by a combination of the Auckland and Wellington Schools. Professor Peren was convinced that this was the right course of action. Arriving on the scene a little later, Professor Riddet was soon persuaded to take this view and both Professors strove toward this end. We need not concern ourselves with the details of the developments which followed. There was a meeting of the Auckland and Wellington University College Councils in February, 1926, at which there was agreement to pool resources. The Coates Government supported the move and, despite strenuous opposition, particularly from Canterbury, the New Zealand Agricultural College, later Massey Agricultural College, was born in September, 1926.

Although other powerful influences were working toward this development, the outcome might have been very different but for the agreement, co-operation and strenuous work of the two professors. To Professor Riddet we must give due credit for the part he played in the establishment of Massey.

For William Riddet the first years in New Zealand must have been exciting. Almost immediately after his arrival he had to make the major decision whether or not to back the amalgamation with Wellington. He, along with Professor Peren, was asked by Senate to revise the syllabus for the degree of B.Agr. This was done by December, 1925, when they recommended the abolition of the subject Agriculture for the B.A. and B.Sc. degrees, an increase in the time taken for the agricultural degree course from three to four years, and the introduction of pass and optional subjects in it, and the institution of the masterate degree in agriculture. Their recommendations, including that for a degree structure in many respects similar to that of the present Massey B.Agr.Sc., were accepted by Senate.

In March, 1926, Sir Frank Heath submitted his report recommending the setting up of a Department of Scientific and Industrial Research, the fostering of research financed jointly by Government and industry, and, as a first and most urgent need, the establishment of an Institute of Dairying in association with the proposed new College of Agriculture.

The new Auckland Professor of Agriculture had had an invaluable and varied experience in practical farm work, he had shown himself a scholar of the highest calibre, and he had had an introduction to farm advisory work, university teaching and research. But he recognized that he had much to learn of agriculture in the grassland farming environment of New Zealand and that much concerning the application of science to production and processing technology that he had been taught at the West of Scotland College needed rethinking in this new setting. In 1926, he spent much of his time systematically touring the North Island visiting farms and dairy factories, meeting farmers, making contact with farmers' organizations and lecturing in rural areas.

Then there was the task of recommending a site for the new College — a task finally entrusted to the two professors. The claims of Masterton, Levin, Palmerston North and Marton were all pressed by interested parties before a decision was given in favour of Palmerston North.

For Professor Riddet, 1926 was a year, not of teaching nor of research, but of familiarization and critical decision-making on policy.

#### WILLIAM RIDDET AT MASSEY

In 1927, the new Agricultural College took over approximately 900 acres of farmland adjacent to the Manawatu

River in the Fitzherbert West district. Headquarters were established in the Batchelar homestead building and the great task of bringing an institution into a living effective reality was begun in earnest.

In that year Professor Riddet divided his time between Auckland and Palmerston North while continuing to probe and assess New Zealand dairying.

In Auckland, there were agricultural degree students ready for their second-year studies. For them, Professor Riddet characteristically improvised a teaching programme arranging lectures from the Auckland College staff in economics, forestry, and physical chemistry, and periodic three-week visits from Dr D. Miller of Wellington for concentrated, if intermittent periods of tutoring in economic zoology. He arranged teaching in bacteriology at the Auckland Hospital by Dr Gilmour, the Pathologist, and gave the elements of dairying himself during his sojourns in Auckland. The students, including Messrs Corkill, Neil, Tetley and Thorpe must have had an interesting year!

Meantime, following the Heath Report, the Government established the Department of Scientific and Industrial Research and an Advisory Council. The latter immediately took up the matter of the formation of a Dairy Research Institute. At a conference in April, 1927, representatives of the Government, the Department of Agriculture, the Research Council, the Dairy Board and Massey Agricultural College agreed that an Institute be set up, operating as a Research Association within the Department of Scientific and Industrial Research and financed jointly by Government and the dairy industry. It was also agreed that arrangements should be made for the Institute and Massey Agricultural College to work closely together, sharing as far as possible staff, buildings, equipment and livestock. Shortly afterward, Professor Riddet was appointed Director of the Dairy Research Institute and assumed the joint rôle of Head of a D.S.I.R. organization and Professor of Agriculture in Massey Agricultural College.

Thus, at the half-way mark, the lines were drawn that were to shape and dominate the pattern of the remaining 31 years of Professor Riddet's life.

We might picture him at this time (1927-8) sitting at his desk in the upstairs study of the Batchelar homestead, planning — planning in detail, courses of study, appointment of staff, the development of the farms, the layout and nature of laboratories, classrooms, a dairy factory, farm buildings, the

establishment of dairy herds, sifting research problems, and grappling with administration. We can picture him out and about daily watching many of these developments eventuate — the roading, fencing, the temporary wooden laboratories and classrooms adjacent to the homestead, the dairy factory, cottages, the No. 1 dairy shed, and the first Friesian and Jersey cattle. We might see him looking into the future, picturing the matured institution built on the foundations on which he was then working. We know from his letters in 1926 that at that time he visualized the College as growing into "a complete university as richly endowed with cultural ideals as the world famous universities of the mother country".

It is appropriate at this stage to mention the names of just a few of those associated with Professor Riddet in those very early days at Massey. Professor Peren was appointed Principal of the College. This is not the time to dwell upon his contribution, but we must pay tribute to the collaboration of these two men which was magnificently productive over a period exceeding 30 years. C. C. Yates, who gave sterling service as Registrar of the College until recent years, was early on the scene in 1927, as was E. Bennett, the Farm Clerk, still a member of the staff today, whose neatly written records are the sole source of information concerning much of the early farm development. Mention must be made of W. J. McCulloch, the first farm manager and of George Colpman, who presided over the No. 1 dairy herd and milking shed under the watchful eye of Professor Riddet, and who must have received more detailed instructions about how a dairy unit was to be run than any other dairyman. G. M. Valentine, who was seconded for service with the College and Institute as Dairy Factory Superintendent, was largely responsible for the planning and equipping of the dairy factory, and was involved in all the early dairy processing trials planned by Professor Riddet. Early key appointments to the Dairy Research Institute staff were Drs F. H. McDowall and H. R. Whitehead, as Chemist and Bacteriologist, respectively. With Professor Riddet, these two men formed a team which was to bring the Institute world renown in the field of research in dairy science.

It is not my purpose to record the details of events as they occurred in the latter half of William Riddet's life. Rather let us look at it in outline, consider some of his personal characteristics, and assess his contribution in the various spheres of his activities.

After the excitement and stimulus of the events associated with the founding of Massey and the Dairy Research Institute, there remained the onerous tasks of consolidation, justification and development. In turn, there was a depression to be weathered, adaptation to wartime conditions required, a post-war development phase to be handled, and a period of steady growth to be guided.

Over this period of 30 years, Professor Riddet's influence permeated the College and dominated all things pertaining to dairying, and his was the guiding hand that piloted the Dairy Research Institute through some critical times.

#### PERSONAL CHARACTERISTICS

What manner of a man was William Riddet?

He was short in stature and kept himself in what, if he had been referring to one of the College bulls, he might have described as "better than average working condition". His Scottish accent was most marked; so much so that those lacking a discerning ear were often in difficulties with him. Even his colleagues were occasionally in trouble. The story is told that on one Saturday afternoon when Professor Riddet had met George Colpman, the dairyman, on the farm, the latter explained that trouble was being caused by rats in the meal store near the dairy shed. Professor Riddet had a ready answer to the problem. "Put in a kart, a kart, mon," he said. Now, George Colpman was somewhat taken aback. He wondered how a dray or spring cart could be manoeuvred into the meal room and what good would come of it anyway, as far as the rats were concerned. However, he was a cautious man. He knew from past experience that the Riddet ideas, however seemingly improbable, could not be taken lightly. While George hesitated, the Professor exclaimed impatiently — "A pussy kart, mon, a pussy kart!"

He had an original, fertile mind. He bubbled over with ideas. He was enthusiastic, stimulating. A 15-minute discussion with Professor Riddet would leave a staff member with enough suggestions for work for the next six months. The following week Professor Riddet would be asking for results! He did not appear to recognize the limitations of time, individual capacity, or facilities. He challenged. He himself worked tremendously hard. Laziness was an anathema to him. Agriculture, dairying in particular, was his all-embracing interest. He appeared to have no hobbies outside things agricultural.

As a speaker he was fluent and could be most persuasive. He had a compelling earnestness which was impressive to

his hearers. But he could not believe that others were not necessarily as interested in all aspects of dairying as he himself was. On his favoured topics he gave his audiences "good measure, pressed down and shaken together and running over".

He had a tremendous capacity for, and interest in, detail. For example, he knew the names and pedigrees of practically all the cows in the Massey herds. He would interest himself in a multitude of tasks. This frequently resulted in tremendous bursts of activity still vividly remembered by his colleagues, as some crisis, such as preparing an address or report at the last possible moment, had to be surmounted.

The limitations of the framework within which he worked must often have been frustrating in the extreme to Professor Riddet. He was so full of ideas for action. Seldom did he accept defeat. He was the great improviser. The ramifications of his arrangements to achieve various ends have always amazed his co-workers. To illustrate: In 1947, in a statement to the Board of the Dairy Research Institute explaining the arrangements which existed between the Institute and the College, he makes what must surely be one of the under-statements of all time, "Study of this Statement may give the impression that the arrangements are exceedingly complicated, but this is not essentially so." The document continues over seven pages of closely typed explanation, at the end of which the baffled reader will happily settle for the conclusion that there was an arrangement, which worked.

When, tragically, within a few years of retirement, he was stricken with leukaemia, he never gave in, but fought over the last grim years with dogged determination and showed courage of the highest order.

#### THE EDUCATOR

Professor Riddet held strong views on agricultural education. By reason of his senior position at Massey, his forceful personality and the respect given his opinions, his was a major influence on the academic policy of the College.

From the start, he believed that, for professional work in the fields of teaching, extension and research, a degree training was essential. For those concerned with managing farms and horticultural units and giving technical service to agriculture such as in dairy manufacturing and wool classing, he felt that appropriate technical training must be

provided and that the College should offer these courses, at least until it was clear that some other organization could do the work as effectively. Thus, diploma courses in general agriculture and dairy farming and in dairy manufacturing technology were established along with the degree teaching in the early years of Massey.

With regard to degree courses, he was a firm believer in a sound training in basic science. Yet paramount in his mind was the thought of agriculture as an integrated whole — not just a collection of science subjects. He championed the control of agricultural teaching by agriculturists and was against narrow specialization at the pass degree level. However, he saw the need for lecturers in agriculture to deepen their knowledge in some field of science basic to their applied work and through his influence a number of staff members were stimulated to undertake advanced study overseas. We have reaped the benefits. Professor Riddet was adamant on the need for students to obtain adequate practical farm or factory experience as part of their degree or diploma qualifications, first because he believed that practice and theory were inseparables in the training of technologists and, secondly, to break down the contention, so often encountered in earlier days, that College-trained men were purely theorists and of little value in dealing with practical situations.

Earlier in his career, teaching occupied much of Professor Riddet's time. He made his major contribution in subject material and treatment in the dairying field. He evolved a pattern in which the teachings of the old world in stock feeding and management and farm-scale milk processing were blended with knowledge and experience of the grass-land farming and large-scale factory manufacturing of dairy products in New Zealand.

Later, through the pressure of administration, his classroom activity was restricted, but he continued to follow closely each student's performance and many were those who individually sought his advice and inspiration. His influence in teaching is still strong today in the work of those who were once associated with him.

Professor Riddet played a prominent part in selling technical education to the dairy industry. He was remarkably successful in this with the dairy technology diploma course. He found a much less encouraging response to the degree training in dairy technology, and the industry is the poorer because of it.

## THE MASSEY DAIRY FARMS

Professor Riddet was a farmer at heart with an abiding love of land and livestock, especially the stock. The Massey dairy farms were both his work and his hobby. At the least opportunity he would snatch the herd test folders from his satchel for a discussion starting on the latest records of Massey cows, moving on to factors affecting production and finishing with ideas for five years' experimental work with the herds.

Deciding policy, and managing and supervising a complex of university dairy farms is no mean task. Professor Riddet revelled in it. He demonstrated that academics could run dairy farms efficiently. He adopted a policy of using the farms to test and demonstrate new practices and equipment — for example, artificial breeding, overhead irrigation, the forage harvester and the herringbone shed. He tried out many of his own ideas, for example, he conceived the use of the electric fence for controlled grazing. He arranged co-operative work, using the Massey stock and facilities, with the Veterinary Research Station at Wallaceville and the Dairy Board. He entered into partnership with Sir Bruce Levy, Director of Grasslands, to devote the Massey No. 2 dairy unit (now stocked with twins) to study of the relation between feed, particularly various pasture species, and the yield, composition and flavour of milk. For this investigation, he developed the conception of an experimental dairy unit comprising land, stock-handling facilities and a field laboratory — a concept which was later to be exploited so successfully at the Ruakura Animal Research Station by Dr C. P. McMeekan.

He developed the idea of using a small pilot farm stocked with a herd of 20 to 30 cows as a teaching instrument and a unit on which staff members could gain further experience and try out their own ideas.

Overall, he strove to bring students and staff into as close a relationship as possible to these various phases of activity on the University dairy farms.

## DIRECTOR OF THE DAIRY RESEARCH INSTITUTE

For his sound initial planning in the establishment and organization of the Dairy Research Institute (N.Z.) and for his leadership from 1927 until his death in 1958, William Riddet must be given great credit. He had first to convince a sceptical industry that such a research service was essential to it. With Mr Valentine he designed the small dairy

factory, and devised and supervised the first exploratory experiments in connection with cheese and buttermaking while the first professional members of the staff were learning dairy work.

It must be remembered that Professor Riddet had no advanced training in research, and scant knowledge of sophisticated technique. His rôle was to organize and stimulate. His extraordinarily wide range of knowledge of the field from dairy husbandry through processing to marketing gave him perspective that none could match. Above all, he was a fount of ideas. It was the task of his associates to reduce the ideas to practicable proportions, devise the methods and produce results.

It was very largely his outstanding work as Director of the Institute that brought him in 1953, at The Hague, one of the highest awards in the dairy world — the Gold Medal of the British Society of Dairy Technology.

#### HIS INFLUENCE ON INDUSTRY

Thus far in this address, the part William Riddet played at Massey and as Director of the Dairy Research Institute has been emphasized, but this should not be allowed to preclude appreciation of his contribution to the dairy industry in New Zealand and at large.

It can be claimed fairly that Professor Riddet had a more complete knowledge of our dairy industry than any other man. It was a great personal tribute to him that he was accepted at all levels as both adviser and critic, and that he could be relied on to give sound, constructive advice when his opinion was sought.

He was a member of the Secretariat of the New Zealand Dairy Industry Commission of 1934, and of the Council of the Department of Scientific and Industrial Research. He was closely associated with the work of the Herd Improvement Council, an enthusiastic supporter of the herd testing movement, a pioneer in the development of artificial breeding, and played a major part in securing the acceptance by the dairy industry of the Herd Improvement Plan in 1939. He was early a keen supporter of pig recording and was chairman of the local Pig Council.

He was an enthusiastic supporter of societies interested in the furtherance of agriculture; the N.Z. Dairy Science Association of which he was President for 22 years, the N.Z. Society of Animal Production, the N.Z. Grassland Association and the Institute of Agricultural Science. In the exten-

sion field he instituted and presided over the Massey Dairy Farmers Meeting and the Dairy Factory Managers Week.

In his service as a trustee and Governor of St. Peter's School, Cambridge, and Supervisor of the dairy farm, he combined his interest in education and agriculture with a concern for the training of youth.

Honours came to him, including the award of the C.B.E. in 1954, but he remained modest and unassuming and, as Vice-Principal of the College, delighted in telling the story of how, after a chance meeting at the dairy, which led to him showing a rather pompous visitor round the farm, he had been offered half-a-crown for his pains!

In retrospect, this able, energetic Scotsman made a very great personal impact upon the events of his time, but perhaps his major contribution was in shaping the careers of men who, in their turn, have become prominent in the spheres of agricultural production, research and education.

This Society honours William Riddet, leader of progressive thought and action, a great dairyman, a great educator, a man of ideas.