

IMPROVING SHEEP FLOCKS

WHAT RESEARCH WORKERS ARE DOING

GOOD PROSPECTS

STRIKING results in stimulating wool growth of Merino sheep have been attained, both from scientific and economic standpoints, according to Mr. H. R. Marston (acting chief of the Division of Animal Nutrition), who has returned from a three-weeks' visit to Queensland.

Experimental supplementary feeding with cystine-rich protein concentrates at Meteor Downs Station during 1929-30, utilising groups of 200 lambs during their first year of growth, he said yesterday, showed that wool production could be stimulated by about 30 per cent, and the cost of feeding less than half that realised by increased wool growth.

The classing of the fleeces taken indicated in terms of the expert classer (Mr. Fryer) who attended the shearing "that apart from the increased weight of each fleece the clip from the control group was not as well nourished as the supplementary-fed animals, the latter showing a bolder staple, and much better defined character."



H. R. Marston

The tendency of the whole clip was to change from a tender 64-70's in the controls to a well-grown 64's quality in the treated animals.

Economic Value Confirmed

Results of the experiment, continued another year, confirmed those of the first year, and enabled them to judge whether the animal increased its power of conversion of food materials to wool fleece after extra strain imposed by the rapid period of body growth was relieved. Figures showed a difference even greater than the previous year—a mean of about 32 oz. of wool, or more than 30 per cent, being realised from experimentally-treated animals. This return was gained by the consumption of a greatly reduced supplement; feeding conditions of the winter months were much less parsimonious.

The classer's report of the second shearing was: "The supplementary-fed animals cut much more bulky, denser fleeces, with a bolder staple of well-nourished wool. They formed a well-defined class of good length, sound wool. The control animals cut thinner fleeces, which were shorter and more tender, and of a lower yielding, and more variable class. The difference in appearance is more outstanding than last year."

The economic value of supplementary feeding for stimulating wool growth was thus confirmed and assured, Mr. Marston said.

"The division has adequately demonstrated that, by careful choice of protein materials—which are by far the most expensive both biologically and economically—the total cost of hand-feeding can be more than accounted for by the wool grown over a period of poor-fodder conditions, or during a time of extreme distress of drought," he added.

Funds for Further Work

An extensive programme of work had been started under funds provided by various organisations for research on pastoral problems.

The Commonwealth Bank had allotted the division £1,000 for the erection of yards and buildings, in which to study hand-feeding for sheep drought relief. The Empire Marketing Board had offered, through Dr. Rivett (chief executive officer of the Council for Scientific and Industrial Research) during his recent visit to England, £3,000 a year for five years, provided private sources in Australia raised a similar amount. "The Pastoral Research Fund, of which Mr. Geo. Aitken is chairman, immediately offered us practically the whole of their interest on money collected by voluntary levy—£2,000 a year"—Mr. Marston said, "and have since given an additional £100 a year.

Dalgely & Co., the Australian Mercantile Land & Finance Co., and the New Zealand Loan and Mercantile Agency Co. have each offered £200 a year, so that already £2,700 is subscribed. The remaining £300 a year is expected to be forthcoming shortly.

"This shows that the work is appreciated in quarters most vitally concerned and for the first time hand-

feeding for drought relief can be proceeded with without restraint."

Figures would be published showing the minimum amount of materials from various market sources necessary to compound drought or supplementary rations to maintain animals, and also assess the extra wool growth during hand-feeding.

Drought-feeding rations might thus be compounded by the pastoralist himself, choosing this or that concentrate, grain, or fodder from fluctuating markets to meet his needs, with confidence of economic returns.

Weaner Cuts 17 lb. of Wool

"The efficiency of the most carefully bred sheep, although enormously above that of more common stock, is still low," Mr. Marston went on.

"The possibility of enhancing it by artificially dilating the capillary beds are being studied with promising prospects. Surgical removal of the pineal gland—a body the size of a pea, at the base of the brain—will promote a greater supply of blood to the glands. The change in wool growth by the operated animal is enormous.

"A weaner from the Waite Research Institute so treated cut 17 lb. of wool with a 5-inch staple, during the first year of its growth. The operation is arduous and difficult, can be done only by a skilled brain surgeon, and consequently holds little hope of economic application. Efficiency, however, may be increased, and other means, mainly pharmacological, are being sought to produce similar effects, which may lend themselves to station practice."

News 27-2-31

FREE TRIP TO LONDON

Chance for University Students

Each year the associated steamship companies grant three first-class return passages to London to students of the University of Adelaide wishing to continue post-graduate study abroad. The passages are available from June to November.

Recommendations are made by the council of the University. Applications for free passages for 1931 must reach Mr. F. W. Eardley (registrar) by Saturday, March 14. Applicants must state full particulars of the study which they propose to undertake abroad and of their financial ability to pursue it.

News 28-2-31

Scholarship Winners

At its meeting yesterday afternoon the council of the University of Adelaide accepted the following nominations for bursaries and scholarships:—

John Creswell Scholarships (awarded by the Royal Agricultural and Horticultural Society of South Australia)—Alec J. Ashton. Awarded by the South Australian Cricket Association.—J. E. Frayne. Awarded by the University Council.—Leonard George Matthews.

St. Alban Scholarship (awarded by the Freemasons' Lodge of St. Alban, of South Australia)—B. M. Jolly.

Thorner Bursary (awarded by the Institute of Associated Teachers)—Ina Alice Owen Fox.

George Thompson Bursary in Commerce (awarded by Adelaide Co-operative Society, Limited)—Ronald Beaumont Love. John Ridley Memorial Scholarship (awarded by the trustees)—Cedric Alfred Neal Smith and Thomas Oliver Mitchell.

Adv. 2-3-31

Sir Charles and Lady Martin are among the passengers for Adelaide by the Ceramic which will berth at the Outer Harbor this morning. Sir Charles will take charge of the experimental work being carried out at the Animal Nutrition Laboratory, Victoria-drive,

News 2-3-31

Mr. W. J. Young, C.B.E. (general manager of Elder, Smith & Co., Limited), has been reappointed chairman of the State committee of Science and Industry Research.



MR. WALLACE V. LUDBROOK

of Norwood, who is studying plant pathology at the University of Wisconsin, America, under a studentship of the Commonwealth Council for Scientific and Industrial Research, has been notified that he has secured the degree of Master of Science. He gained his Bachelor of Science degree at Adelaide University before leaving for America a year ago.

Adv. 3-3-31

SCIENTIST WHO "TINKERS"

LIGHTING PLANT OUT OF OLD TINS

Used to Helping Himself

Sir Charles Martin, the new director of the Animal Nutrition Division of the Council of Scientific and Industrial Research, is known to many Australians as director of war-time laboratories, but to others he is known as the man who made, with spare tins, an acetylene gas plant at Lemnos Hospital.

That, he explains, was a trifle, but a laboratory-trained investigator who could find such use for old tins, bulked large in the eyes of many Australians who saw service on Gallipoli.

Sir Charles had to be drawn before he would say anything about that spare tins episode in his career. "It was simply a matter of necessity," he said. "I was working long hours and when daylight failed, something had to be improvised to give light in the laboratory. Therefore, being by nature a bit of a tinker, I had to adapt anything that came to my hand, and the acetylene plant was the result. In any rate, it was only for my department."

Sir Charles said he learned much of his "tinkering" when he was in Australia about 30 years ago, first as demonstrator at Sydney University, and then as demonstrator and lecturer at Melbourne.

"In those days," he said, "if one wanted a glass tap or equipment of that description, one could not simply go to a telephone and ring up a manufacturing chemist or warehouse and ask them to send one round. It had to be made, and in that way I learned a lot about shaping soft glass. In fact, I was often my own glass blower."

Adv. 6-3-31

PROFESSOR GREGORY'S LECTURE

A copy of the Joseph Fisher lecture in commerce given by Professor Gregory last August has been received from Adelaide University. This lecture entitled "Current Problems in International Finance," was published in "The Advertiser" in a series of articles. Copies of the lecture now embraced in a brochure may be had at the University.

ANIMAL NUTRITION

BENEFIT TO WOOL INDUSTRY

Sir Charles Martin Arrives

Tall, of scholarly bearing and quiet, deliberate manner, is Sir Charles Martin, C.M.G., D.Sc., F.R.C.P., F.R.C.S., who arrived from London by the Ceramic today to assume the directorship of the animal nutrition laboratory of the Commonwealth Council for Scientific and Industrial Research in succession to the late Prof. T. Brailsford Robertson.

He will also be professor of biochemistry and general physiology at Adelaide University.

Sir Charles was professor of pathology at London University, and director of the Lister Institute of Medical Research until December 31 last, when he was superannuated. An Englishman by birth, he spent 14 years in Australia as professor of physiology at Melbourne University, and returned to Britain 30 years ago. In 1923 he revisited Australia for a few weeks.

Since the war the Lister Institute had been largely concerned with the study of human nutrition, said Sir Charles. That research arose following food shortage among the different armies and the civil population. Years ago it had been thought enough if food were supplied in sufficient quantity to serve as fuel for energy and to repair waste, but research had revealed that small quantities of other things, including vitamins, were needed.

"By the way," he added, "the term vitamin was coined in the Lister Institute in 1911.

Speaking on the work of the animal nutrition laboratory, Sir Charles said that Prof. Robertson had laid down a scheme which would take several years to complete. It seemed to be adequate, and would be continued. A tremendous programme of work was to be undertaken. It was creating much interest in Great Britain and South Africa.

IMPERIAL CO-OPERATION

"An endeavor is being made to ascertain the problems confronting each dominion and so obtain economy of effort," said Sir Charles. "In addition, the work will be done in places where the individual problems are most acute.

"Our work will be to ascertain the most economical way to feed sheep in order to produce the maximum amount of the best quality wool with the least possible expenditure. It will be our business to deal with the problems of the producers. We will obtain the knowledge for the pastoralists who will have to apply it."

Discussing the position of the manufacturers of woollen goods in Great Britain, he said the lack of demand for woollen clothing by women and the advancement of the artificial silk industry were the chief causes of depression in the woollen industry.

Sir Charles spent a month in South Africa on his journey to Australia. He said that he did not think that pastoralists in that country would obtain a living were it not for the efforts of investigators of the Onderspoort Institute, which had been founded by Sir Arnold Theiler, the eminent veterinarian.

In the Union those on the land were confronted by many insect-borne diseases, while some parts of the country were deficient in mineral constituents, which were necessary to ensure the growth of nutritive fodder.

The new director inspected the laboratory at Victoria Drive this afternoon, and will later on make tours to study the work of the various field stations operating in conjunction with it.

AUSTRALIAN FRIENDS

Sir Charles expressed pleasure at being able to return to Australia. "I have not only the few friends of my own generation, but in addition I have a number of young friends," he said. "I had 1,000 men pass through my hands when I was at Melbourne University."

During the great war he was attached to the Australian Imperial Forces, and was the pathologist at the Third Australian General Hospital on Lemnos Island. While there he constructed and installed the acetylene gas lighting for his laboratory. His ability in this direction he attributes to his early years in Australia.

After the evacuation of Anzac he served in Egypt and the Sinai Desert. Later he was in charge of laboratories on the Somme.

Lady Martin has accompanied her husband. They are staying at the Hotel Richmond.