

WAITE RESEARCH INSTITUTE ASSISTS FARMERS AND PASTORALISTS

Experts Investigate Improvement of Soil and of Breeds of Wheat

VISITORS to Waite Agricultural Research Institute are all impressed by the successful practical work carried out there. The Director (Professor A. E. V. Richardson) says the aim is to enlarge agricultural knowledge and extend it to farmers and pastoralists.

PROBLEMS of farm crop production, pasture improvement, and plant nutrition and genetics are being investigated and soils are being classified. Soil surveys are being made, and diseases in farm crops are being studied.

Murray irrigation soil fertility problems are being investigated. Investigations into the water requirements of wheat



Professor A. E. V. Richardson

Professor Richardson says each acre inch of rainfall on a wheat crop is sufficient to produce 3.3 bushels to the acre.

An outstanding feature of fertilizer tests has been a marked response of crops and grass to soluble phosphates. With barley and wheat, the heaviest dressings give the greatest profit.

Seventy-two unfertilized wheat plots in drill strips, 5 chains long, have been sown on virgin land to determine the natural variability of the soil.

Wheat Breeding

A collection of varieties from semi-arid regions of the world, especially where wheat has been grown for centuries, has been made by the institute.

Wheat has come from India, Egypt, Russia, China, Japan, Palestine, Argentina, and America.

Selections for high yielding ability, drought resistance, and early maturity may be made from introduced and locally grown varieties, but if these do not yield well, or undesirable characters like weak straw, red grain, disease susceptibility, and shattering of the grain, then they will be crossed with varieties free from these defects, but having good points, such as lateness of maturity.

10 Years to Test

Early maturing Indian and Egyptian varieties have been extensively used at the institute in crossing with the best local varieties.

Under the best conditions it will take seven to 10 years before a new and improved wheat hybrid can be produced and thoroughly tested out.

This work is being done by Dr. I. F. Phipps, who undertook three years' intensive research in the plant genetics at Cornell University.

Tests on 50 acres of uniform pastures subdivided into eight grazing areas are being conducted to determine the effect of phosphates on sheep growth and development, and the yield and quality of wool.

These investigations are part of a co-operative study into the mineral content of pastures by the Adelaide University in collaboration with the Empire Marketing Board and the Council of Scientific Research.

Soils and Plants

Professor J. A. Prescott and his staff have worked out the relationship between the reaction of the soil and the rainfall of South Australia.

They are studying soil fertility problems facing settlers on the Murray, to place on a more scientific basis, methods of reclamation, systems of cropping, and fertilization of the soil.

Mr. C. S. Piper (chemist), with Mr. Geoffrey Samuel (plant pathologist) have investigated grey speck disease in oats, first noted at Mount Gambier. First it was thought to be caused by a fungus, but it has now been found to be due to a deficiency of manganese in the soil.

Mr. Samuel is investigating the cause of tomato wilt to find the best method of control. The insect carrying the wilt—a species of thrip—has been determined.

Dr. J. Davidson (entomologist) has arrived from Rothamsted Experimental Station, and will study the lucerne flea, woolly aphis, and other insect pests.

Research Institute are all im-

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ADV. 12 2 29 DR. HUGH CAIRNS.

REPORTS ON BRAIN CLINIC.

LONDON, February 11.

The Medical Research Council has published the report of an Adelaide Rhodes scholar, Dr. H. W. B. Cairns, the winner of the Rockefeller travelling scholarship, which he utilised in spending a year at Dr. Harvey Cushing's brain clinic at Boston.

The report describes wonderful operations and new methods devised to meet difficulties of the soft, rubber-like consistency of the brain matter. The clinic conducts only one operation daily, and sometimes it takes all day. The mortality in the operations is less than 10 per cent. Dr. Cairns is now assistant surgeon in the London Hospital.

ADV. 13 2 29 SCIENTIFIC FORESTRY.

AN ENDOWMENT FUND.

GENEROUS OFFER ACCEPTED.

CANBERRA, February 12.

The Commonwealth Government have received from Mr. Russell Grimwade an offer to establish an endowment of £5,000 for the encouragement of scientific forestry in Australia. Mr. Bruce stated to-day that the Government were very glad to accept the generous offer as evidence of Mr. Grimwade's generosity in placing at Australia's disposal means by which students could study abroad forestry research, the result of which would be of inestimable value to Australia.

Interest on the endowment will be made available biennially as a prize to enable a selected Australian forester to go to Europe to take a refresher course at the Imperial Forestry Institute, Oxford, and to visit the forests of Germany and France. Qualifications for candidates are a full forestry course at the Canberra school or its predecessor, the Adelaide University, and two years' practical forestry work in Australia. A further condition is that the prize-winner, after completing his European studies, must return to Australia and serve in either a Government forest department or private forestry employment, for three years.

Greater Interest Excited.

Mr. Bruce said it was most gratifying to note that forestry was exciting greater interest, as evidenced by the fact that no fewer than four contributions had been made to the Australian Forestry School. In addition to Mr. Russell Grimwade's endowment, the Sydney and Suburban Timber Merchants' Association had contributed £50 towards the purchase of a library for students. Mr. A. E. Heath, of A. C. Sabton & Son's Timber Company, had provided a prize of £10 for the best essay, and the Schlich Memorial Fund had provided a gold medal for the best student for the year. The Empire Forestry Conference, which recently visited Australia, had shown that what Australia had done in regard to eliminating the wastage of her timber resources was wholly inadequate. As a result a Bill to give necessary legislative sanction to the Commonwealth forestry policy was now before Parliament.

CANADIAN CONFERENCE.

FOUR SOUTH AUSTRALIAN DELEGATES.

A CIVIC FAREWELL.

In consequence of the visit of Professor W. F. Osborne, of Manitoba, to Adelaide in August, South Australia will be represented by four delegates at the Fourth National Conference on Education, to be held at Vancouver from April 14 to 20. They are Professor Sir Archibald Strong, Dr. A. A. Lendon, Messrs. Alex Melrose and George Jeffrey. Sir Archibald has already sailed for Canada, and the remaining three delegates were tendered a civic farewell by the Lord Mayor on Thursday afternoon.

Mr. Bonython said delegates were also being sent from Victoria and New Zealand to the conference, which ranked next to the Imperial Conference in London in importance. It was held in Canada as a demonstration to the United States of America that Canada was part of the British Empire and that the other Dominions were ready to help solve the educational problems that confronted them. The members of the delegation would have many opportunities of discussing the advantages of South Australia and Australia generally, and he felt sure they would prove themselves to be ambassadors worthy of the State they represented.

The sending of delegates to the conference at Vancouver was the outcome of the visit to the different States of Professor Osborne. While in Adelaide he had addressed a meeting at the Town Hall and discussed the practicability of sending a small delegation from this State. Professor Osborne had emphasised the desirability of having prominent citizens from Adelaide at the conference, and those present at the meeting were struck by the Imperial note sounded by him. He mentioned that the United States of America, with its huge population, had a great influence over the people of Canada, with its smaller population, and for that reason he desired that the British Dominions of the Pacific should be represented at the conference.

The education systems of Australia and New Zealand differed very considerably from those of Canada, and the co-operation of the Dominions was a matter which must therefore appeal to the imagination of the citizens of the three Dominions. In such co-operation there must eventually be mutual gain. The exchange of opinion and ideas which the Vancouver conference would make possible, should be of great interest and advantage to all. Through the development of the ideals common to the people of the three British countries, there must be advantage to the world at large, and it was hoped that the conference at Vancouver would witness the beginning of closer relations between Canada and the Dominions of the Pacific. The delegates had the best wishes of the people of Adelaide and the State which they represented, for a pleasant trip and success at the conference.

Speaking on behalf of the Government, the Minister of Education (Hon. M. McIntosh) supported the expressions of goodwill by the Lord Mayor. He was sure that as a result of the conference the term, "Adelaide for culture" would more than be maintained. On behalf of the State he thanked the delegates for the services they were voluntarily giving to education in South Australia, and said he was sure that the result would warrant their efforts. Although Professor Osborne had also visited Melbourne and Sydney and had advised them to send delegates to the conference, South Australia, he was pleased to say, would provide the bulk of Australia's representation.

Dr. Lendon said he remembered that Professor Osborne had asked for young and active men, yet Sir Archibald was the only Jackson among them. Mr. Jeffrey—Speak for yourself. Without their leader, Dr. Lendon said they were like the tail of a cricket team. However, all would do their best. The conference seemed to be an effort to get a higher standard of culture than that of forty years ago, but at that stage he did not propose to speak of their plans.

Messrs. Melrose and Jeffrey also spoke.

SIR DOUGLAS MAWSON

Expedition to Antarctic

DISCOVERY OFFERED

(PUBLISHED IN 'THE TIMES')

LONDON, February 15.

Sir Douglas Mawson (Professor of Geology and Mineralogy at Adelaide University) has arrived in London. He declined to make a statement concerning his proposed expedition.

It is understood that he will discuss his plans for an Antarctic expedition with Mr. L. S. Amery (Secretary of State for Dominion Affairs), and will fully explain his plans, concerning which there have been extensive Anglo-Australian negotiations.

Mr. Amery will indicate that the British Government is prepared to let Sir Douglas have the Discovery immediately it is overhauled. The vessel is practically ready to depart, except for a crew and stores, at any desired date.

The Discovery was recently prepared for the continuance of the Falkland Island whaling expeditions, but if Sir Douglas is satisfied he will take the ship, which the British Government will replace with another vessel.

The principal venue of the expedition is believed to be an Antarctic quadrant in connection with the less known areas.

Britain suggested more than a year ago that Australia should further investigate the quadrant in view of its great potentialities.

It was then unofficially indicated that Britain was prepared to co-operate. There is no reason to believe that this intention has been altered.

NEWS 18-2-29

PROGRESS AT UNIVERSITY

NEW CHAIR OF ECONOMICS

Agricultural Science Faculty

The Council of the University of Adelaide has decided, in consideration of the large number of students in the Department of Commerce, and in view of the importance of the subject, to create a Chair of Economics.

This statement is contained in the annual report of the university for 1928, made to His Excellency Sir Alexander Hore-Ruthven, V.C.

The report states that applications have been invited, and it is expected that an appointment will be made early in the year.

As funds were not available to provide the salary of an additional professor the council has decided not to fill at present the Chair of Botany which will become vacant by the resignation of Prof. T. G. B. Osborn. The department will be carried on this year under the superintendence of Prof. Harvey Johnston as honorary professor.

The passing of the Agricultural Education Act by Parliament in 1927 laid upon the council the obligation of providing adequate instruction for higher training in agricultural sciences. Provision has accordingly been made for the creation of a Faculty of Agricultural Science. Regulations will be drawn up for courses of instruction leading to the degrees of Bachelor and Master of Agricultural Science.

Waite Institute

It is believed that this will enable the university to provide a body of highly-trained agricultural experts from which the State can draw its future instructors and advisers in all agricultural matters.

The work of the Waite Agricultural Institute, which began in March, 1925, has developed rapidly during the past year. Through the generosity of Sir John Melrose, of Ulooloo, who gave £10,000 for the building of a laboratory, the university was able to construct the first group of permanent laboratories at the institute.

Assistance was provided by the Empire Marketing Board and the Council for Scientific and Industrial Research, each of which contributed £3,000 toward a laboratory for co-operative investigation on pasture and soil problems.

Dr. J. Davidson, formerly entomologist of Rothamsted Experimental Station, has been appointed as head of the entomological department of the Waite Institute.

The report points out that five tutorial classes, eight lecture classes, and seven study circles were held within the University. In addition three tutorial classes and one lecture class were held in the city and suburbs. Country classes were formed at Peterborough, Burra, Murray Bridge, Gumeracha, Riverton, Gawler, Angaston, and Port Pirie.