

AGRICULTURAL RESEARCH.

Progress in Other Countries.

Dr. Richardson's Impressions.

Dr. A. E. V. Richardson yesterday said the main impression he gained from a 12 months' trip abroad enquiring into agricultural developments was the immense importance attached to agricultural research, and the vast field which still remained untouched.

Director of the Waite Agricultural Research Institute (Dr. A. E. V. Richardson) returned to Adelaide on Thursday, after a tour of the principal agricultural countries of the world, during which he made exhaustive enquiries into the progress of agricultural research and education abroad. He was met at the station by the Vice-Chancellor of the University (William Mitchell), Professors Brailsford, Robertson, and Prescott, and the Secretary of the Royal Agricultural Society (H. J. Finnis). Dr. Richardson on arrival in Sydney gave an interview to a representative of "The Advertiser," which was published on Saturday. Yesterday he said the main impression he gathered from his tour was the immense amount of work and money being expended upon agricultural research abroad compared with Australia, and the field of research that still remained untouched. During his tour he visited South Africa, England, Scotland, Denmark, Sweden, the United States, Canada, Japan, and Java.

Wheat Breeding at Cambridge.

Dr. Richardson said agricultural research in Britain had received material encouragement from the Imperial Government since the war, and the Research Institutes at the Universities of Cambridge, Oxford, Reading, and Aberdeen, had greatly increased their activities. At Cambridge research in wheat breeding, animal



Dr. A. E. V. Richardson.

breeding, plant pathology, and cold storage investigations for fruit had made considerable progress. Sir Rowland Siffen, at Cambridge, had been successful in producing prolific varieties of wheat of high quality, and these were rapidly superseding the older varieties, especially in the Eastern countries. The results of cold storage investigations on fruit would be of the greatest benefit to Australia, South Africa, and New Zealand. Oxford research institutes in agricultural economics and agricultural engineering had recently been established. The work of those institutes had yielded of great value to the newly established beet-sugar industry in Britain. Dairy Research Institute, at Reading University, had done much to improve milk supply to the cities, and to stimulate the production of high-grade, clean cream from dairy farms. The Rowett Institute for Animal Nutrition at the University of Aberdeen was paying special attention to the effect of deficient mineral salts in the animal diet, and the role of vitamins in animal nutrition. The world's oldest and most famous agricultural research station, Rothamsted, established by Sir John Lawes in 1841, had greatly extended, and its activities embraced almost every phase of investigation work on soil and crop problems. It had made many great contributions to agricultural science, and had done more than any other institution to place the cultivation of the soil on a scientific basis. At Aberystwyth much attention had been devoted to the improvement of grass and cocksfoot and clover, and prolific strains of great promise had been obtained. Governments of the Irish Free State, when Ireland had appropriated

large sums for the development of agricultural education and research within their respective states. At the National University in Dublin a strong well-equipped faculty of agriculture, with a college and experiment station at Glasnevin, had been established by the Government of the Free State. The Government of Northern Ireland had recently appropriated £70,000 for the establishment of a Faculty of Agriculture at Queen's University, Belfast, and an agricultural research station at Hillsborough. The farmers of Northern Ireland had contributed £80,000 towards the establishment and endowment of the Agricultural Research Institute in Scotland there had always been strong colleges of agriculture in the Universities of Edinburgh, Glasgow, and Aberdeen. Recent developments of interest were the establishment of the Rowett Institute of Animal Nutrition at Aberdeen, and the Animal Breeding Research Institute at Edinburgh. One could not fail to be greatly impressed with the new interest in agricultural research displayed in Great Britain since the war, and by the growing enthusiasm of the farmers towards agricultural education and research in Britain had hitherto been delayed by the conservatism and inefficiency of the agricultural classes, and the apathy of the Government. English farmers knew thoroughly the details of farm practice, and inherited a traditional experience and skill with crops and stock which made them unrivalled.

Folk Schools in Denmark.

He travelled extensively in Denmark, and was much impressed by the apparent prosperity of the agricultural industries and the intensive character of the agriculture. The average yields from farm crops and from dairy cattle were the highest in Europe, and this was probably due to the keenness of the agriculturists for adult education, the co-operative spirit displayed in every phase of production, and to the organised system of agricultural extension work which enabled the teachings of the research institutes to be carried to every farmer in the kingdom. As an example of the demand for adult education, 12,000 persons, practically all farmers, attended the folk high schools for courses of instruction during the past year. Although Denmark was a small and relatively poor country of some eleven million acres in area, its appropriation for agriculture and agricultural education, apart from the large sums spent by private and co-operative agricultural institutions, exceeded £600,000 per annum. The Agricultural College of Copenhagen, an institution of university rank, had 600 students, and acted as the centre for training agricultural scientists. There were in addition 31 agricultural schools scattered through the rural districts of Denmark.

A feature of the agricultural research in Sweden was the success obtained in the breeding of new and hardy varieties of wheat, barley, and oats to resist the rigorous conditions of Northern Scandinavia. The plant breeding institutes of Avalof and Lands Krona were responsible for the production of new and improved cereal varieties. Wheat production in Sweden had nearly trebled during the last 25 years through the use of hardy prolific varieties of quick maturing habit, which enabled the boundaries of wheat production to be pushed hundreds of miles further south.

Investigations in Australia.

Agricultural research was being followed with great vigor by other countries. Agricultural research not only gave a rational basis for the systematic and progressive development of agriculture, but experience in other countries had shown that production from every type of crop could be greatly increased by fostering fundamental and applied research in agriculture. There was immense scope for the application of science to agriculture in all countries, but especially in the newer countries where the industries had not age-old tradition to guide them. No one could fail to be greatly impressed by the benefits which had followed the encouragement of agriculture in Europe. A considerable amount of investigative work had been carried out in Australia, especially on the wheat crops, and the result was reflected in the improved wheat yields of the past generation. But there was an immense field of work still to be covered, not only with wheat, but with all the primary industries. In the light of what he had seen abroad, improvement in primary production would depend very largely on the extent to which the results of scientific research could be applied to every branch of agriculture, horticulture, dairying, and

stock raising. The provision of adequate facilities for the development of agricultural research, and the application of its findings to agriculture, was one of the most urgent needs of the present day. The rapidity at which science could be applied to agriculture would depend on the number of trained workers available and the willingness of Governments and private institutions to foster and encourage its systematic development.

ADV. 28:127

IMPRESSIONS OF TRAVEL.

MRS. A. E. V. RICHARDSON RETURNS.

A pile of luggage on a porter's truck literally smothered in sprays and baskets of beautiful flowers, denoted the whereabouts of Mrs. A. E. V. Richardson, when the Melbourne express came in yesterday morning, and she returned from her trip round the world. On the platform Mrs. Richardson was busy collecting another array of floral trophies and endeavoring to shake hands with a dozen people at once, and retrieve the wing of a valuable butterfly, which was eventually rescued by a porter from under the very wheels of the train. Black and white is evidently fashionable, for Mrs. Richardson was wearing it, but as her wrap coat was of the new reversible type, she was able to



Mrs. A. E. V. Richardson.

change the tout ensemble on the platform in the twinkling of an eye, and appeared in a white coat trimmed with black instead of vice versa. "I don't want to be in mourning for a home-coming," she explained, adding, "they say these things are an economy, but if they are it is only in time, not in price.

Clothes were a prohibitive price she found in Paris, and the reason why was explained when she heard a saleswoman remark to another, "Be sure and put up the price for the Englishwoman. She probably wants to take advantage of the low rate of our franc." As the price asked for an ordinary cotton frock worked out at £25, however, Mrs. Richardson decided there was no advantage to be gained,

and proudly declares that she is the only woman on record who can swear that she went to Paris and returned without buying a hat or a frock. "Many people blame the French people for their brusque attitude to the English these days," she said, "but I do not think outsiders can realize how much the French suffered during the war, nor how desperately poor many of the people are under the veneer of luxury of Paris." In Italy Mrs. Richardson had the pleasure of reporting to the police every third day of her visit there, for it was just at the time that Mussolini's life had been attempted by an Englishwoman, and all foreigners were closely watched. All Italy was in the throes of hero worship of the man who saved their country, and on every available wall and hoarding pictures of Mussolini were being painted, and it was as much as anyone's life was worth to point a finger of derision at them. As Mrs. Richardson significantly remarked, "He is on the very crest of a tidal wave of Latin enthusiasm." Speaking of the English Royal Family, she said the sentiments they inspired were those of lasting affection in her opinion. Their simple dignity was the outstanding thing in all the pageantry of a presentation at court. Princess Mary had developed amazingly. She looked a radiant young mother, but at the great court functions there was something of the regal dignity of her mother apparent in her bearing now. The Duke of York had the air of having much more aplomb than the Prince of Wales. Mrs. Richardson considered that the Duchess of York's presence was almost of the Irish type, with her blue eyes and her curly dark hair. She was extremely petite and her manner had a charm all its own, although it was in contrast to that of the other members of the Royal family, who were schooled in the art of public appearance from the time they were born.

"Etiquette in Japan is extremely rigid," said Mrs. Richardson, "and there are many places in which foreigners are not allowed under any consideration. The Emperor's Chrysanthemum party was to have been barred to them this year, but the Science Congress was exempted from this, for the Japanese could not do enough to show their appreciation of learning, and were much further advanced than western people dreamed. Yokohama was still in ruins, but they had rebuilt Tokyo, and were striving to replace their precious libraries and art treasures. Mrs. Richardson described life in a real upper class Japanese house as luxury combined with a minimum of work. The windows in all four walls slid back, and the bedding on the tiny beds was all placed in a satin bag, and presto; there was one room "done" for the day. Japanese music could hardly be judged by European standards, for to the western ear it sounded like a number of dogs howling as a rule, but their beauty of line and grace in the old posture dances of the country were unexcelled. There will be no music in Japan for some months, however, for on the death of an Emperor no musical instrument may be played in the land for a full twelve months. Mrs. Richardson attended a reception at the palace of the Shogun, and met many of the highest officers of the Japanese army and navy. They were all anxious to hear Australia's opinion of their country, and ridiculed the idea that they had designs on this land. The national and private life of Japan is imbued with deep religious feeling. Taken on the whole, the country was poor, and it was only the wonderful fertility of the volcanic soil which sustained the millions of population. The wealthy class, however, was extremely wealthy. What struck Mrs. Richardson was the fact that the rigid caste laws gave no opportunity for a brilliant man of the people to make his way in the world. "Thank God conditions are different in Australia," she said, "for such a system would mean the fettering of many fine spirits, whose work would be of untold national benefit." One of the most beautiful sights which anyone could see was the great feast of lanterns, when thousands of brilliant colored paper lanterns were set adrift at the Sacred Island in the Indian Sea and left to drift out to the souls of the departed. "It was a wonderful sight," said Mrs. Richardson, "and one that would bring tears to the eyes of any onlookers by its beauty and its spiritual significance. It was almost

a tideless sea and the lanterns flickered and glowed against the blackness of the night with weird beauty as they drifted ever so slowly on their mission of love.

It is a far cry from the Feast of the Lanterns to the Covent Garden Opera House on the night of Dame Nellie Melba's farewell. That was another wonderful sight, and there was literally and metaphorically the width of the world between them. The great building was crowded and seemed literally ablaze with jewels. It seemed to Mrs. Richardson as if the diva had recovered for a space the rich beauty of her more youthful voice so that she sang as she did fifteen years ago.

In Java the Australian travellers probably wants to take advantage of the learned something of the language difficult. Miss Yvonne Richardson has been asked for an ordinary cotton frock worked left at school at Eastbourne, in England, out at £25, however, Mrs. Richardson decided there was no advantage to be gained, of the school year in July, and her mother