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THE ROTHAMSTED CENTENARY

IN spite of the difficulties arising out of the War, an impressive gathering assembled at Rothamsted on July 21 to take part in the commemoration of its hundred years of uninterrupted work in agricultural science. There have been several similar occasions in the history of the Station, when the leading figures in the agricultural world have been glad to testify to the value of its activities. The first was in 1855, when a new laboratory building was formally handed over to Lawes and Gilbert as a testimonial from British farmers in recognition of twelve years pioneering work. The second was the jubilee of the Rothamsted Experiments, celebrated in 1893, when the experiments, having completed fifty years, had left their mark not only on home farming but also on settled agriculture over a much wider area. Now, after the passage of a further fifty years, we were witnessing another ceremony—not, of course, on the international scale which would have been appropriate in normal times, but none the less a very outstanding demonstration of the high regard in which the past and present work of the Station is held in scientific and agricultural circles. Lord Radnor, chairman of the Lawes Agricultural Trust, presided, and the Right Hon. R. S. Hudson, Minister of Agriculture, received a special welcome from the three hundred guests representing various scientific societies and all sides of the agricultural and allied industries. Representatives, diplomatic, scientific and agricultural, from twenty-eight countries were present.

Welcoming the guests, Lord Radnor recalled some of the main facts in the history and achievement of the Station, and said that the completion of the first century of work coincided with the coming retirement of Sir John Russell and the appointment of Dr. W. G. Ogg, of the Macaulay Institute of Soil Research, Aberdeen, as director. In his speech, the Minister of Agriculture pointed out how the proper use of fertilizers so firmly based on Rothamsted work from its earliest days is now more than ever essential in the food production campaign. He gave as an example the key position of superphosphate—the first great practical outcome of Lawes' experiments—

in the present need to establish new grass on worn-out plough land, and bring poor pasture into productive arable cropping. Fortunately, owing to the Allied victories in North Africa, the supply of this essential requirement is improving, for cargoes of phosphate rock are now coming in. He was pleased to find that, thanks to the practical example presented by land managed by war agricultural committees, farmers are more ready to adopt new methods than they have ever been. In conclusion, the Minister congratulated Sir John Russell on his well-earned retirement and expressed his hope that Rothamsted would long continue its work in fundamental agricultural research.

Sir John Russell then gave his director's address. Remarking that it was the last time that he would address an annual gathering in his present capacity, much of his speech dealt with the way in which Rothamsted fits into the general pattern of agricultural research and education in Great Britain. The function of Rothamsted, he said, is the development of a sound, trustworthy science of plant growth for the use of experts, teachers and farmers. Once the scientific principles are definitely established, the local organization can proceed to apply them to the solution of immediate practical problems—a vitally important task in modern agriculture, the success of which is limited by the amount and value of the scientific knowledge available.

The remainder of the programme was designed to give a view of the extensive and excellent modern equipment of the laboratories and farm against the background of the early history and continuity of the famous experiments. The visitors were conducted through the laboratories, where each department had arranged exhibits to illustrate important

results, and special apparatus such as the electron microscope and polarograph. To amplify the necessarily short demonstrations, a comprehensive summary of the work of every department was distributed in booklet form. A recent account of the botanical investigations appeared in *NATURE* of July 24, p. 91. In the main hall was a collection of prints and original letters which recalled the earliest days of the Station, when the experiments were conducted in the old barn laboratory and the Lawes-Leibig controversy was in its bitterest phase.

The tour round the farm was made over a course that could be followed by tractor-drawn trailers on which the visitors were accommodated. Owing to the large company, loud speakers were called into service for the first time. Broadbalk, carrying its hundredth successive wheat crop, was the central attraction of the tour, and this year the field had risen to the occasion and produced a crop well above average. Thanks to the trailers, many visitors obtained a better view of the modern field work of the Station than ever before, for they saw many factorial plot arrangements testing problems of immediate practical importance: the substitution of potash by salt for sugar beet and barley, the utilization of sewage sludges and compost, manurial trials on flax, to mention only a few. Long-term work involving the study of slow changes in the soil was represented by rotation experiments on the utilization of straw. One of the most interesting exhibits in the farm buildings was the special equipment used at Rothamsted for laying out, harvesting, and threshing the field experiments.

The impression given by this visit to Rothamsted on its hundredth birthday was not one of age, but rather of abounding vitality. H. V. GARNER.

NEWS and VIEWS

Scientific Research in Great Britain

In a debate on scientific research in the House of Lords on July 15, Viscount Samuel urged the need for further expansion of scientific research, particularly in relation to the utilization of coal. After stressing the need for research in all branches of science relating to food and agriculture, in nutrition, in building, in town and country planning and in the social sciences, he referred to the emphasis laid on research in the report of the Coal Industry Commission in 1925-26, and asked for an indication as to the Government's future plans for the expansion of research into all branches of the fuel and power industries. Lord Samuel mentioned the importance of giving the scientific worker himself proper status and the opportunity of advancement to administrative appointments when he possesses administrative ability, and asked whether there is any plan for allocating the work of scientific research between the three main agencies now engaged in it, namely, the State, the universities and the industries. Secondly, he asked whether anything could be said at this stage with regard to the conditions of employment of those engaged in scientific research, and whether there is any possibility of a combined scheme for pensions which would enable accrued pension rights to be transferred if a worker passes from one institution to another. Next, he inquired whether there is any prospect of a State scientific service being

established parallel to the Civil Service and under the general direction of a commission like the Civil Service Commission but containing professional men of science. Finally, he again raised the question of the advisability, after the War, of appointing scientific attachés to the principal British Embassies abroad.

In supporting Lord Samuel's motion, the Earl of Listowel suggested that the Government programme to guarantee our industrial future should promote a gradual but steady increase in existing facilities for scientific research into the post-war problems of industry, an expansion including the research workers and the scientific equipment of universities, private firms and Government institutions. Secondly, to prevent overlapping and to secure the right priorities, these extended facilities should be co-ordinated and developed according to a national plan for scientific research. Lastly, it should arrange for consultation and co-operation with the Dominions and Colonies and with others of the United Nations. Lord McGowan welcomed the Government grant of £5,000,000 for research on coal, but considers that that sum will be found quite inadequate. Speaking of science in relation to industry generally, he urged that if we wish to hold and increase our export trade, there must be intensive research to find new processes and new products. Research on existing processes is day-to-day work, never ending, and accumulated knowledge creates of its own accord considerable industrial