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CONTENTS

| | PAGE |
|--|------|
| Organisation of Agriculture | 909 |
| Linnæana | 911 |
| British Fresh-Water Copepods | 912 |
| Aspects of Chemical Engineering | 913 |
| The Jutes in Kent | 915 |
| Short Reviews | 916 |
| The Positive Electron. By Prof. P. M. S. Blackett, F.R.S. | 917 |
| Progress in Non-Ferrous Metallurgy, 1908-1933. By F. C. T. | 919 |
| The Loch Ness "Monster" | 921 |
| Obituary : | |
| Mr. H. M. Martin | 921 |
| News and Views | 922 |
| Letters to the Editor : | |
| The Dispersion Formula for an Ionised Medium. —Prof. D. R. Hartree, F.R.S. | 929 |
| Reactivity of the Sulphur Linkage in Wool.— Dr. J. B. Speakman | 930 |
| Constitution of Neodymium, Samarium, Europium, Gadolinium and Terbium.—Dr. F. W. Aston, F.R.S. | 930 |
| Catalysed Reaction of Hydrogen with Water and the Nature of Over-voltage.—J. Horiuti and Prof. M. Polanyi | 931 |
| Theory of Supraconductivity.—Dr. C. J. Gorter Distortion of the Tropopause due to Meridional Movements in the Sub-Stratosphere.—Dr. K. R. Ramanathan and K. P. Ramakrishnan | 932 |
| An Ultracentrifugal Study of Crystalline Pepsin. —J. St. L. Philpot and Inga-Britta Eriksson- Quensel | 932 |
| Rotation Period of the Planet Venus.—Dr. E. M. Antoniadi | 933 |
| Dynamics and Mechanism of Aliphatic Substitu- tions.—Dr. E. D. Hughes and Prof. C. K. Ingold, F.R.S. | 933 |
| Biological Races in <i>Psyllia mali</i> , Schmidberger. —K. B. Lal | 934 |
| Quantity of Meteoric Accretion.—Dr. Harold Jeffreys, F.R.S. | 934 |
| Research Items | 935 |
| Condensation of Water in the Atmosphere. By M. G. B. | 938 |
| New Science Laboratories at Bedford School | 938 |
| Fishery Research in Newfoundland | 939 |
| Annual Congress of the British Institute of Radiology Minerals Causing Silicosis | 940 |
| University and Educational Intelligence | 941 |
| Calendar of Nature Topics | 942 |
| Societies and Academies | 943 |
| Forthcoming Events | 944 |
| Official Publications Received | 944 |

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Organisation of Agriculture

FEW people, probably, realise the extent of the potential revolution in agriculture foreshadowed in recent legislation in Great Britain, the farmer himself least of all. Here is an intensely individualist industry, still largely traditional and practised over the greater part of the country upon principles which have changed very little in their essentials these two hundred years. All over England, right up to Tudor times, and later than that in many places, farmers were working mainly to feed and to clothe themselves and their families, with very little thought for commercial enterprise except around some of the larger towns and seaports. It was not until the growth of population in the eighteenth century, coinciding as it did with the introduction of new crops and improvement in the technique of cultivation and the breeding of livestock, that agriculture turned definitely from the self-sufficient to the commercial type of organisation.

Even so, the changes introduced were not comparable in any way with those that were to substitute the products of Sheffield for the handicraft of the village blacksmith, and were to remove the weaving industry from the banks of many rivers to concentrate it among the coalfields of Yorkshire. For although the one-man business of fifty acres or so is no longer characteristic, and has given place to holdings where labour and management are no longer combined in the same person, they are still one-man businesses in every other sense. There is no division of the functions of management, no specialisation in production, no openings for men of ability without capital to invest, no organisation for the bulk handling of products, whether for processing and manufacture or for direct sale.

In recent years, much has been said of the need for planning in industry. This is one of those things, like disarmament, upon which all reasonable people are agreed but which none can accomplish, and it is the more striking that agriculture, the most widely diffused, the most disorganised and individual of all industries, should have been selected for the first adventure in national planning. Under the Marketing Acts of 1931 and 1933, powers are accorded to the Ministers of State for the exercise of a degree of control in agriculture which has never been contemplated in Great Britain except by the most advanced political thinkers. The quantity of food imports is no

longer to be dependent upon the capacity of Dominion and foreign producers, but may be subject to regulation by the Ministry of Agriculture and the Board of Trade, and regulation may extend to the point of prohibition. At home, the right of free sale of certain commodities has at one stroke been taken from farmers, and it is apparently only a matter of a short space of time before all the principal food products of the country will follow the lead given by milk, pigs and hops, and the farmer's concern with his business will stop short at production, leaving the marketing boards to handle his produce and give him such prices as they can procure.

Nor is this all, for under the Act of 1933, the State is empowered to control the amount of his production. He may be ordered to withhold that which he seeks to sell; he may be prohibited from increasing his output of that which is profitable to him, in the interests of other farmers less favourably placed or less efficient; he may be forbidden to embark upon new lines of production.

Planning has gone so far, but if this great experiment in State socialism is to have any chance of success, it has only begun. Sir Daniel Hall, in the Alexander Pedler lecture of the British Science Guild entitled "The Organisation of Agriculture", delivered before the Cambridge Philosophical Society on November 6, extracts from which appeared in our issue of November 11, p. 755, indicated some of the work which lies before it. In some ways, the term 'planning' is a misnomer, for in the haste to provide remedies for the sorry plight of many farmers, there has been no time for any serious thought about what a planned agriculture should embrace. No sane person, nowadays, would aim at national self-sufficiency, but should Great Britain contemplate State aid to make profitable any branch of farming upon which the home producers have been engaged? Sir Daniel Hall took the wheat crop by way of illustration, and he might have added sugar beet. Here are crops in the production of which world competition is fierce, while England enjoys no natural advantages. Planning here can only have been based upon the principle of helping arable farming during one of the recurrent crises in its history, and with more time for reflection, Great Britain would probably have been content to leave the production of sugar to the Continental countries and the West Indies, and to let unrestricted competition bring about the rationalisation of wheat-growing by modern methods in those

parts of Great Britain suited to them, instead of fostering an extended cultivation of the crop by traditional methods under the stimulus of an artificial price.

Nor should it be regarded as sufficient, on the other hand, for a planned agriculture to leave crops such as these to find their own level in a competitive market, while directing the force of the new organisation towards the development of those perishable and semi-luxury products in the growth of which England enjoys natural advantages. So far, the State has proceeded to the assistance of this or that branch of farming—milk, meat, potatoes, eggs, etc.—by the appointment of reorganisation commissions working at different times and in watertight compartments. There is no co-ordinating commission, no overriding authority reviewing the recommendations of the various product commissions and planning so that the desired development shall be steady and complementary. In this respect, planning, so far, has resembled more the action of a salvage corps, dashing hither and thither to save property in danger of destruction just as the calls have come in, without regard to relative importance or indeed whether some of it were worth saving at all. The substitution of 300,000 acres of sugar beet, in ten years, for other crops, the expansion of 30 per cent in the wheat acreage in two years, the shift from meat production into dairying, are examples of the farmer's quick response to haphazard and unregulated price fixing. It is not in the general interest that agriculture should be swinging about in this direction or in that as one commodity or another catches the artificial sunlight. 'Planning', if the term is to have a scientific status, must envisage the industry as a whole.

Again, it is not clear that sufficient thought has been given to the determination of the principles upon which assistance is to be based. At the present time, sugar beet is encouraged by subsidising from the national Exchequer the manufacture of sugar from home-grown beet. Wheat-growing is fostered by a call upon millers to make a deficiency payment when the average price of English wheat is below a certain figure. Bacon pigs are produced at contract prices varying with the cost of feeding stuffs. Milk is sold compulsorily upon a scale of prices fixed quite arbitrarily and dependent upon the uses to which it is to be put. The price of hops is determined by the appropriate marketing board, and the absorption of the crop by brewers at this figure is secured by

discrimination against imports. The 'salvage corps' is using every sort of weapon, new and old, in its fight with the flames, and its chiefs have not yet taken time to evolve a scientific technique of rescue and prevention.

It may be urged that weaknesses such as those enumerated here are inevitable in any attempt upon a scale so gigantic to re-plan an old industry, and that they will be eliminated as time goes by. Perhaps a more serious difficulty may come from the industry itself. Whatever may be said against unrestricted competition, there is no doubt that it weeded out the inefficient producer ruthlessly. Will the new prosperity, which planning is expected to bring, result merely in organised stagnation? How is it possible to guarantee profits to producers, and at the same time to require of them a high standard of efficiency? As Sir Daniel Hall pointed out, it is by the farmers' answers to these questions that the new organisation of agriculture will be judged.

It is here that science has its part to play, and the powers granted under the Marketing Acts to the commodity marketing boards enable them to set aside sums for the vigorous prosecution of research, which is essential if the whole scheme is not to be found wanting. The leakages, waste and losses arising from faulty organisation, uneconomic utilisation of labour and machinery, the ravages of animal and plant diseases, the un-instructed use of fertilisers and feeding-stuffs, call for continuous investigation and correction, while an immense amount of new work is still awaiting organisation and endowment in order to raise the quality of the food products presented to the public, and to devise better and cheaper methods of transport, processing, storage and distribution. As the result of Sir Daniel Hall's own work at the Ministry of Agriculture in planning so thoroughly the organisation of agricultural scientific and economic research, the equipment is already available and working. It needs nothing more than the active co-operation and support of the new marketing boards to enable the agricultural research institutes to supply all the services needed for this vital branch of the planning scheme. The country, clearly, will have to pay higher prices in the future for its food, and it will not be satisfied unless those who exercise the almost unlimited powers now bestowed upon them show a determination, from the outset, to give the public some definite gain for the higher cost of living imposed upon it.

Linnæana

A Catalogue of the Works of Linnæus (and publications more immediately relating thereto) preserved in the Libraries of the British Museum (Bloomsbury) and the British Museum (Natural History) (South Kensington). Second edition. Pp. 246 + 68+7 plates. (London: British Museum (Natural History), 1933.) 30s.

WHEN the compiler of the above work (the late Mr. B. H. Soulsby) took over the charge of the central library of the Natural History Museum from B. B. Woodward in 1921, he inherited what he must have realised was an unusually difficult task. His predecessor had spent his life in an intensive study of the bibliography of natural history, and his knowledge of it was rivalled only by that of Sherborn himself. He was, moreover, a working naturalist of no mean order. Soulsby possessed neither of these qualifications, and it is not surprising that his transfer from the Director's office at South Kensington to the library was regarded by the friends of that Institution with some misgivings.

It is true that Soulsby's surroundings could not have been more inspiring. The library had been left by Woodward in perfect order, and, as regards the middle and later literature of natural history, it was one of the finest, if not the finest, in the world. On all sides were the superb collections, the study of which was a constant and urgent stimulus to the expansion of the library. Notwithstanding these advantages, there was a real danger that Soulsby would be compelled to accept defeat, and settle down to a literal and uninstructed discharge of his duties. But he was never daunted—indeed he seemed unconscious of his difficulties—and it says much for his determination and powers of adaptation, to say nothing of his enthusiasm, that when he retired in 1930 he had acquired a knowledge of the library, not in fact equal to that of Woodward, which was impossible in the time, but sufficient to earn for him the respect and admiration of his colleagues. Who will say that had he taken off at South Kensington instead of Bloomsbury, he would not have become another "B.B."?

The present work is the second edition of a much smaller and less ambitious catalogue which was compiled by B. B. Woodward and W. R. Wilson. It was published in 1907 as a modest contribution to the celebration of the bicentenary of the birth of Linnæus. It ran to 27 pages only