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International Aspects of Agriculture.

IT is sometimes said that agriculture is no subject for internationalism. Indeed, this dictum was not infrequently hurled at those who, after the War, made the first tentative attempts to start or to revive the international handling of agricultural problems. Oblivious of the fact that the produce markets of the great countries were becoming, with a decisive rapidity which was leaving all arguments in the rear, scenes of the most bitter struggles of international competition, the old-fashioned agriculturist was still arguing up to a few years ago—and in a few cases even continues so to argue to-day—that the knowledge and practice of each country are all-sufficient for that country. This point of view has not been without its influence on the research side of the subject. It has certainly affected in no small degree the study of the best means of getting the results of the experiment stations adopted in practice.

The doctrine of national self-sufficiency in matters agricultural has wrought deep havoc particularly on the social side of agricultural life. It is greatly delaying the fruitful interchange of social experience between the agriculture of different parts of the world. Wherever it has been broken down the results bid fair to be beneficial, and it is to the advantage of European agriculture that it has been able to revive and to place on a hopeful basis a body which even before the War stood for the international idea among research workers and also among practical farmers. The Fifteenth International Agricultural Congress recently held at Prague under the auspices of the International Commission of Agriculture went with a swing, and reflected great credit on a body which seems genuinely representative of large sections of European agriculture, even if it has not yet managed to secure adequate representation from Great Britain, Australia, or the Americas.

The International Commission of Agriculture stands for independence from government action. It is of course accustomed to work in friendly relations with the great State organisations which handle agriculture on an international footing, such as the League of Nations, the International Labour Office, and similar bodies. Indeed, one of its most important functions is to help in conveying the opinions of the research and of the farming world to these and other official organisations, in which effort it has been singularly successful of recent years, as all can testify who have followed its activities since 1927, the year of the World Economic

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Conference convened by the League of Nations at Geneva. But it does not profess to resemble these official institutions, and guards most jealously its essential prerogative of opinion and action independent of all government influences.

Men of science can only view with sympathy ideals such as these. What the International Commission of Agriculture is now trying to accomplish from the practical farmers' point of view—to focus and to harmonise world opinion on world problems—pure science has always tried to do in its own magnificent field. It has had one great advantage. If practical agriculture has too frequently been wrongly argued to be a national craft, then science, as has always been admitted, is from its very nature international. Even popular opinion now endorses this view; elementary textbooks do homage to it.

Nor has science in any way improperly disowned its world character when joining hands with agriculture. However frankly and rightly agricultural experiment stations and demonstration farms have been financed and controlled by national authority and for national ends, their results have been yielded up for the good of all. No trade secrets are possible for the investigator of agricultural science so long as that profession follows in the footsteps of the workers in pure science.

There is, however, a shadow side to this free trade in intellect; it leaves the intellectual, after years of labour, with an empty purse. No government and no institution responsible for experimental work in the sciences bearing on agriculture can afford to pay salaries on so handsome a scale as to be at all commensurate with those massive rewards which sometimes accrue to the authors of mechanical and other inventions capable of being patented and then exploited by private enterprise. While this does not deter the man with a genius for biological investigation, it undoubtedly affects adversely the recruitment of biological students. Prof. T. G. Hill admitted this difficulty in his presidential address to Section K (Botany) of the British Association in referring to the present dearth in the British Empire of trained botanists for administrative and technical services when he said the work must be its own reward.

Such disadvantages are met with in the whole profession of science, but apply with particular force to the biological scientific career. While, however, in other departments of science some alternative reward, principally of reputation, fame, and distinction, comforts the soul of the investi-

gator, the agricultural investigator appears to share very markedly neither in the honours which fall to academic science nor in the material rewards of commerce. The irony of the position is that successful work of the kind which he undertakes may spell not merely thousands to a few individuals but positively millions to a whole country. In his recent presidential address to Section M (Agriculture) of the British Association, Sir John Russell stated that, by using improved methods of cultivation, the farmers of Victoria, Australia, now obtain one bushel of wheat for each inch of rain falling during the season, whereas forty years ago they obtained only half a bushel. In Java the Dutch have produced a new sugar cane which has quadrupled the output of sugar. The production and use of artificial fertilisers in the past thirty years have changed completely the problem of the world's food supply, while the figures as to the great national wealth created by new agricultural strains of wheat, such as Marquis in Canada and the United States, run into sums of astronomical dimensions.

It would, therefore, seem a simple act of justice and of wise policy to arrange that some encouragement should occasionally be held out to the agricultural inventor. That such reward should be international in character would also appear to be thoroughly appropriate when we remember the universal application of most great agricultural advances. It thus becomes pertinent to direct attention to a recent highly interesting suggestion put forward by the Secretary-General of the Czechoslovak Academy of Agriculture, Dr. Edouard Reich, which might serve the end contemplated. Simultaneously with the Fifteenth International Congress of Agriculture already referred to, though not directly in connexion with it, the Czechoslovak Academy of Agriculture, which is a research and educational institution serving the needs largely of countries in eastern and central Europe, held a meeting of its corps of foreign members. At this meeting, Dr. Reich put forward various suggestions designed to further international co-ordination of scientific and intellectual effort applied to the agricultural domain. Among these suggestions was one for the foundation of a prize in agriculture. It was estimated that an endowment fund of about £10,000 would have to be collected by subscription. It is much to be hoped that the organising committee of distinguished men of science and other workers who were elected to deal with the proposals put forward at the meeting will be able to work out the details and carry them into practical effect.