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Imperial Agricultural Research.

IT is distinctly unfortunate that the first seven plenary sessions of the Imperial Agricultural Research Conference were held during the week in which two political parties held their annual conferences. The subject matter under discussion at the research conference is of the greatest significance to an Empire in which the foremost industry is agriculture and the future of which depends wholly upon the progressive realisation of the vast potential resources of the lands which it embraces. Nothing has been left undone by the Empire Marketing Board and the Ministry of Agriculture to emphasise these two points. The reports, memoranda, and pamphlets which they have prepared and distributed to the delegates present for their information and guidance in discussing the various items on the agenda are calculated to interest a wide public, and would undoubtedly have been extensively used by the Press for this purpose had the meetings to which they refer been held a week earlier. It can scarcely be expected, however, that the Press will give undue prominence to a conference dealing with such impersonal and serious questions as those relating to the influence of scientific research upon our economic position, unless they are dealt with in a brilliantly illuminating and arresting manner and by speakers who have attained a position in popular esteem which rivals that held by the leaders of the Conservative Party and the Labour Party respectively.

The items on the agenda were so arranged that the plenary sessions during the opening week were devoted to the consideration of administrative questions. The task of considering the agricultural problems confronting the various parts of the Empire, for the solution of which the aid of science must be invoked, has been delegated to groups of specialists. Now it cannot be suggested seriously that any of the so-called technical questions which have been delegated for the consideration and report of specialist commissions, questions affecting veterinary science, soils and fertilisers, plant pathology, the preservation and transport of food and raw materials, animal and plant genetics, agricultural economics and dairying, are without interest for any of the delegates present at the Conference. Time spent on the discussion of the problems related to these various branches of agricultural research would have been exceedingly well spent. The delegates would have been able to grasp the magnitude of the responsibilities of

the agricultural services, they would have been able to envisage their problems as a whole and the inter-relations of the work already being carried out in various constituent parts of the Empire, and to survey the possibilities of co-operation in connexion with the researches already in progress and those others which the Conference might decide were imperatively needed.

However, it was pre-ordained that the Conference should give first consideration to administrative questions relating to staffs and institutions. The discussions which arose out of them at the plenary sessions are certainly illuminating. In connexion with man-power, it was alleged that there is a serious shortage of suitable candidates for most branches of scientific services supported by Governments, a shortage which is being accentuated by the growing demand for specialist officers made by the non-self-governing dependencies. The Research Sub-Committee of the Imperial Conference attributed this shortage to the wholly inadequate appreciation of the importance and value of scientific research on the part of the public, of the Press, and even of Governments themselves: to the uncertainty in the minds of students embarking on a university course as to the career offered by agricultural research: to the increasing demand by private employers for men with a university training in science: and to the lack of knowledge shown by educational institutions and parents of the careers available overseas in the various branches of science and their special attractions. The shortage of candidates is particularly acute in the services—other than medical—for which a training in the biological sciences is a requirement.

The only satisfactory and permanent remedy for this state of affairs, suggested Lord Lovat, Parliamentary Secretary of State for the Dominions, is to make the Agricultural Research Services in pay, status, career, and rewards the equal of other Government services carrying equal duties and responsibilities. It is folly to expect that the best men from the universities will be attracted to agricultural science while there are so few definite and certain prizes at the top. High initial pay is an insufficient inducement. Practically every subsequent speaker endorsed these views, which will obviously commend themselves to every scientific worker in the Empire.

These are the views which have been advanced from time to time in our columns. Generally speaking, the flow of entrants to a career is regulated by its attractiveness, and not the least attractive aspect of a career is its estimation in the public

esteem. This esteem must be more than a recognition of the money value of those officers who enter specialist services; it should include a proper understanding of their creative outlook. Nothing has done more harm to scientific workers than the popular acceptance of the theory that those who have achieved eminence in a particular field of science have become so specialised in their interests and so biased as to render them unfit for positions of administrative responsibility. Too early specialisation in a student's career would, it is true, tend to produce an undesirable narrowing of outlook, but provided specialisation is left to the post-graduate stage of a student's educational career, there could be no better preliminary training for future administrators than that provided by a liberal and general course in science. This fact has been recognised by certain provincial governments in India. They have been recruiting their Indian administrative staffs from the scientific institutions, particularly the colleges of agriculture in their provinces, and have found this method thoroughly satisfactory.

It is imperative that any general science course in the schools should include general biology as a subject and should not be confined, as it is in most schools in Great Britain, to physical and chemical science. The interest which is stimulated in a subject at school has a direct bearing upon the course of study undertaken at a university. Moreover, as Sir Daniel Hall rightly observed, biology should be taught in the schools not only because the Empire will have to make greater and greater demands for trained investigators in the field of biology, but also because no man can properly be regarded as well-educated who does not fundamentally understand how a plant grows and how an animal lives and has its being. If, moreover, as Sir John Farmer pointed out, an interest in biology were stimulated in the schools, it would not be taken up as a 'soft-option' at the universities mainly by those students who were conscious of their deficiencies in physics and chemistry.

The suggestion that the shortage of biological students at the universities is due to the lack of endowments for biological study was discounted by Major Walter Elliott. He emphasised the fact that there is no shortage of candidates for the medical schools, for the obvious reason that parents are satisfied that medicine provides a satisfactory career for their sons and daughters. To the proposition that scholarships should be provided for public and other secondary schoolboys to enable them to take up agricultural science at the uni-

versity under the condition that they afterwards entered the agricultural service, he was resolutely opposed. This inducement, like the provision of pensions under the Civil Service scheme for the retention of officers in the service, he regarded as coming within Sir James Currie's definition of "attracting candidates by means of well-baited but otherwise poor booby-traps."

Various other means of stimulating recruitment to the overseas services were discussed. It was pointed out that various post-graduate scholarship schemes in existence have been successful in this regard. Those scholarships provided by the Government, tenable at the Imperial College of Agriculture at Trinidad, have already provided a number of officers for the colonial agricultural services in the Tropics. The scheme of the Empire Cotton Corporation has also been successful in obtaining men for cotton research in various territories. On the other hand, no success has so far attended the efforts of the Australian Commonwealth Government to obtain recruits for certain biological services by the grant of similar scholarships. The Commonwealth offered post-graduate scholarships to the value of £300 a year for two years, with £150 travelling allowance, in addition to the payment of all special fees in connexion with study. Some of these scholarships were offered to enable students to specialise in mycology and genetics. On the completion of their course, they were to be guaranteed at least three years employment under government at a minimum salary of £400 for the first year, £450 for the second, and £500 for the third. No applications were received for these scholarships. This was attributed to the past neglect of the agricultural services by the Australian Government and the failure of the people of Australia to appreciate the need for agricultural research.

Generally speaking, the discussion on training and recruitment was disappointing. It is true that much that needs saying has been said several times already in the past twelve months at gatherings of Imperial delegates, so that it was difficult to escape the platitudinous. But since every representative of the Home Government present subscribed to the view that the Imperial Agricultural Research Service must provide an attractive career for first-class men, if it is adequately to fulfil its prescribed functions, it is reasonable to expect that they should have defined its attractiveness in specific terms, and stated what further financial provision the Government is prepared to make, and what financial support has been

promised or is expected from the Dominions and non-self-governing Dependencies, for the effective carrying out of the schemes submitted to the delegates for their consideration. It is to be hoped that some definite statement of this character will be made before the break-up of the Conference.

Cambridge under the New Statutes.

THE Vice-Chancellor, in his recent address at the commencement of the academic year at Cambridge, referred to the heavy strain which has fallen during the past year upon the administrative officers of the University—the Registrar, the Secretary of the General Board, the Treasurer, and, we may add, the Vice-Chancellor himself—and upon the members of various boards and committees. When 1000 pages of ordinances have to be recast to meet the requirements of new statutes, the labour involved must necessarily be extremely heavy. It may not be without interest to inquire after a year's working how far the results obtained justify not only last year's work, but also the heavy work involved over a period of years by the labours of the Royal Commission and the subsequent Statutory Commission.

What are the gains of the new scheme? The first one that strikes the eye at once is the feeling of security that the younger married 'don' has gained through the existence of a pension scheme of the same type as holds in the other universities of Great Britain. This means a comparative freedom from serious financial anxiety, and it makes easier the free interchange of teachers between Cambridge and other universities. Coupled with this is the advantage to the University which must accrue from a scheme which ensures the retirement of the teaching staff on reaching an age limit. Opinion will vary as to the proper age for retirement and the benefit that comes from a rigorous compulsory scheme, but it is clear that the scheme is, on the whole, a definite improvement on the old order of things.

Financially, many teachers in the University also benefit by the increased stipends which the annual grant to the University secured by the Commission has made possible. University stipends still lag behind the corresponding figures for professional careers outside, but the disgrace of the charity pittance awarded in the past to distinguished teachers has been stopped. It is for the University to watch that fresh developments are not marred by inadequate financial arrangements. This may check some of the valuable growths which in the past have come from poor beginnings; an