

referred to the failing of insincerety in the nation. We are often called the French of the East, meaning that we are polite, but unfortunately this very politeness makes us insincere. We often mean one thing and say another; as students we ought rather to train ourselves to say the honest truth, however blunt it may be than sacrifice it in the hope of saying something that would please our teachers.

Agriculture and Education.

The relations which should exist between the two great Departments which are found in most civilised states, that which concerns itself with education and that which is charged with the investigation of Agricultural problems and the propagation of improved methods of agriculture, have always been rather an open question. The history of Saidapet in our own Province, shows how the pendulum has swung first one way and then the other. We find the Educational and the Agricultural Department each at times controlled that Institution, while for a considerable time the problem was solved by a system of joint control. It is fitting therefore that the subject of agricultural education should receive special attention from those concerned, and certainly there has in the past, been no lack of discussion, marked at times by considerable misconception and lack of a sense of proportion. The matter formed one of the most important subjects for discussion at the meeting of the Board of Agriculture at Coimbatore in December 1913, when it was thoroughly discussed, and the way cleared to a truer conception of the many problems interwoven with it. The matter was however considered of sufficient importance to warrant further discussion this year, and an informal meeting was convened by the Hon. Member Mr. Claude Hill, on the 4th and 5th February at Pusa, immediately before the meeting of the Board of Agriculture.

The full report of this meeting and the general conclusions arrived at, are not yet before the public, and it would be premature to speculate on what lines these resolutions will be. The general scope of the discussions may however be judged from the Hon. Member's opening speech which was fully reported in the papers.

Mr. Hill specified five directions in which the activities of the Department of Agriculture should proceed.

- (a) Scientific investigation.
- (b) Courses of instruction to fit Indians to help in such investigations.
- (c) Instruction in practical agriculture.
- (d) A course of instruction to train Agricultural instructors and demonstrators to work in the Department.
- (e) Instruction for Agriculturists.

That this classification is on the whole sound, no one will deny. The first two, and the last but one are already being energetically pushed in our own College, and nothing further need be said about them.

As for the other two, they need some elucidation, for it is a very open question as to how the instruction to agriculturists can be given, nor is it quite clear what is meant by (c) instruction in practical agriculture. We are all agreed that some instruction must be given to agriculturists, and indeed a subject which is very closely allied to this, has taken a prominent place at every meeting of the Board of Agriculture for some years past, namely, "The best means of bringing improved methods to the notice of the cultivator."

It is or should be clear that this teaching cannot be imparted unless there is subject matter to impart, though it is equally

evident that this axiom is frequently forgotten by those who clamour about the necessity for higher education in Agriculture. That is to say teaching must be largely confined to imparting simple improvements which have been carefully tested, and whose value has been carefully estimated. This is being done in all provinces, by very different methods—by leaflets, by practical demonstration either on Government or hired land, by peripatetic instructors, by the vernacular and Anglo-Indian Press, with the help of the Revenue Department, by means of Exhibitions and other similar methods, which though they may not have reached the standard of 'hustle' which American demonstration methods often suggest, yet are in a quiet and methodical way, having a great effect in educating the agriculturist.

Whether anything more than this is at present needed, is uncertain. The value of education, if the demand for it is to spread rapidly, must be self-evident, and it is perhaps too early to say that the advantage of a vocational education in agriculture is at present very marked, though undoubtedly as knowledge of agricultural methods and experimental trial of suggested improvements increase, such a vocational training will hold out better and better prospects of being profitable. But all this progress requires staff, and where are men to be obtained, save from the Colleges? And so the argument ends in a circle; the Colleges are waiting, for the spread of district work, to give them the materials for a really sound vocational training in agriculture, while the Districts wait on the Colleges to give them the necessary trained men for the prosecution of their various activities.

A judicious policy will endeavour to keep these both going at once, concentrating in particular districts where work can be carried on most rapidly relatively to the staff engaged.

These facts should be borne in mind when approaching this problem of Agricultural Education. The Educational Expert

may find himself bewildered by such an attitude: he says in effect "here are schools, here are teachers, here are children to be taught. They must be taught something: why not teach them agriculture?." It is perhaps natural, but it is wrong, and can do no good, and if the results of the discussion at this Conference, serve to emphasize the impossibility of teaching Agriculture except under very special circumstances in Primary or even Secondary Schools, it will have justified its existence.

Fungi chiefly with relation to Plant Diseases.*

Fortunately in a tropical land like India, this subject requires but little introduction, for all are familiar with fungi in some of their aspects. Fungi are low forms of plant life. All being devoid of chlorophyll, none of them are green. Chlorophyll, as you know, is the green substance in the leaves of plants by means of which, in the presence of sun-light, they can take the salt-solutions absorbed from the soil by the roots and the gases of the air and from them can manufacture food to build up their own structure. Plants that do not contain chlorophyll are unable to do this and therefore must make use of nutriment already manufactured by the plants possessing the requisite chlorophyll. Fungi, then, cannot make their own food from simple substances but are entirely dependent on other plants or on animals. They may get it either out of living plants or from dead and decaying vegetation. In the latter case, where the nourishment is obtained from leaf-mould, cow-dung, bread, wood and such like substances, fungi really do useful work in decomposing the dead matter and rendering it again available as plant food although when they attack bread or timber in houses they are looked on from an economic point of view as destructive agents. In the first case, the fungi which derive their food directly from living plants are called parasites or parasitic fungi while the plants on which they live get the name of host-plants.

*Extracted from paper read by W. McRae Esq., M. A., B. Sc., F. L. S., at the Madras Exhibition on 5th January 1916 and illustrated by lantern slides.