

Rai Sahib A. Rama Rao, chronicled his personal experiences of visits paid to rice milling factories for a series of years. In the earlier days he used to find about the mills hillocks of paddy husk which later gave place to smaller hillocks of ashes—the husk being used as fuel. Of recent years even these ash heaps were disappearing owing to a growing demand for this stuff as manure. He would very much welcome a small mill to be driven by cattle power as it would be within the means of even the ordinary ryot to purchase. The discussion was becoming quite interesting but the President was reluctantly constrained to stop it as the hour was late and one more paper was on the Agenda.

How to spread Agricultural Education among the Masses.

The subject of agricultural education is engaging the prominent attention of the Government of India at present. The gigantic War that is being waged in Europe, has among other things, exposed the inadequacy of food production in the British Empire and awakened the statesmen and politicians who control its destinies to a sense of the necessity of improving and developing agriculture in different parts of the Empire so as to make it self-contained in the matter of food and other requirements of the Empire. India which is an essential component of the mighty British Empire is an Empire in itself with incalculable resources which, if but fully developed, will enable her to bear a large portion of the burden of the Empire in the different branches of its activities. It is but natural, therefore, that at a time when the resources of the Empire are being taxed to the utmost the Government of India, following in the foot-steps of the Imperial Government, should set its heart on the development of the agricultural, industrial and commercial possibilities of India. Not that this question was altogether neglected in the past; but a fresh impetus has been given to its solution in consequence of the revelations made by the War, though financially this is a time most unsuited for tackling

this question. The increased allotments that are being granted to the Department of Agriculture in spite of great financial stress and strain, the appointment of the Holland Commission to enquire into the possibilities of industrial development, and the recently announced appointment of a Trade Commissioner at London for the advancement of Indian trade are all indications of the earnestness of the Government of India in the development of the resources and the promotion of the material prosperity of the country.

In the matter of agricultural improvement it is gratifying to note that the Government of India have fully realised the importance of giving a prominent place to the subject of agricultural education. Early in 1916 a Conference was held at Pusa under the Presidency of Sir Claude Hill to discuss this subject. A number of resolutions were passed at that Conference, but evidently not being satisfied with the conclusions arrived at, the Government of India again called together a Conference consisting of officials and non-officials which met recently at Simla, also, under the presidency of Sir Claude Hill. The question of agricultural education in its various aspects was thoroughly discussed at this Conference and a number of important resolutions were passed. The proceedings of the Conference reported in newspapers are naturally short and incomplete, and a comprehensive criticism of its conclusions can only be made after the publication of the official report. From the information already furnished to the public it is, however, possible to make a few general observations.

A question of far-reaching importance was raised in the course of discussion at this Conference, namely whether demonstration work or agricultural education should be given prominence in the development of Indian agriculture at this stage. Some members were of opinion that demonstration should have precedence and that all the men that Agricultural Colleges are able to train for the next 10 years or so should be absorbed into the Agricultural Department to carry on demonstrations, while some other and particularly one gentleman said that preference should be given to agricultural education. It seems to me a bad policy to stifle demonstration work at present. The vast majority of our ryots are illiterate and the only way of drawing them

out of their conservative groove and leading them to the path of Agricultural improvements is to carry on demonstrations as extensively as possible under their very nose. Any kind of agricultural education that may be initiated cannot and will not reach the grown-up rural population of the country. Agricultural schools may be started in hundreds; but the ryot will hardly think it worth his while to go to such schools and begin his education. To him practical proofs of the benefits of scientific agriculture will appeal more than the instruction that he may receive from teachers and books; and hence the necessity of extending the operations of the Agricultural Department in the sphere of demonstrations. While recognising the importance and necessity of expanding demonstration work, one cannot altogether forget the influence of agricultural education on the younger generations and the far-reaching results which the education of the boys in the profession in which they are to be engaged in after-life will bring about. The chief obstacle that stands in the way of the popularisation of scientific methods of cultivation in India is the illiteracy and ignorance of the ryots. If the ryots had in their boyhood received some education, both literary and agricultural, the work of Agricultural Officers would have been much easier. The mistake of not educating the rural population in the past has now been exposed and surely it is the duty of the Government to see that this mistake is not perpetuated. It is high time, therefore, to think out and initiate a liberal policy of education for the boys of the agricultural classes. Apart from this standpoint of the improvement of agriculture, the question of agricultural education has also to be looked at from the standpoint, of the problem of the unemployed which is already forcing itself on the attention of the administrators.

Literary education is spreading in the country by leaps and bounds. Elementary schools are springing up like mushrooms, and the number of boys attending such schools increases by thousands every year. The one aim of all these boys at present is to pass some examination, procure a certificate and worry Government Officers for appointments. Boys of rural districts who, under ordinary circumstances would take to agriculture, their ancestral profession, are drawn

away into the whirlpool of literary education and struggle hard to secure a passport for Government service. 90% of them fail in their attempts and leave the school disappointed and dejected, unfit for Government service and for their own natural vocation towards which unfortunately they are developing a feeling of dislike and scorn. Even among the successful boys many find it impossible to get into Government service and they go about in the country ever seeking appointments and ultimately finding it a wild goose chase become discontented and turn out mischief-mongers. The problem of providing employment to these unhappy youths, both those who fail to complete their literary education and those others who having completed it and passed the examinations find it impossible to procure appointments, has to be tackled and successfully solved if there is to be contentment and happiness in the country. Viewed from this standpoint also the necessity of changing the present educational policy and introducing some sort of agricultural education so as to enable at least the majority of boys of the rural districts to remain on the land and carry on agriculture profitably becomes abundantly clear. Considerations such as these lead one to the conclusion that the subject of agricultural education is all-important and should not be left in the lurch even at the present stage of agriculture in India when it is not desirable, no doubt, to slacken the efforts in carrying on demonstrations.

How best can agricultural education be spread among the masses is the point to be considered. The resolutions passed at the Simla Conference, in my humble opinion, do not go far enough in this matter. It was decided there that there should be an Agricultural College in each Province for imparting higher education in agricultural science, and that one or more agricultural schools should be established in each rural district near Experiment Stations and Demonstration Farms for training the sons of farmers in practical and theoretical agriculture. The number of Experiment Stations and Demonstration Farms in each Province is not very large at present, and if agricultural schools are only to be opened near such stations and farms the rate of progress in the spread of agricultural education among the masses will neither be

appreciable nor satisfactory. Of course, the starting of a larger number of agricultural schools, it may be argued by those who are against such a policy, depends upon money and teaching staff. Both these are difficult to get at present, and hence there should be no grumbling at the inevitable slowness in the spread of agricultural education. One must admit that without money and men for teaching, agricultural schools cannot be opened. But are these insuperable difficulties? I think not. As far as money is concerned I think it possible to chalk out a scheme of agricultural education which does not involve such formidable expenditure as is considered necessary by the authorities. Of course, some money has to be spent and the Local Government can make a provision for the same by reserving a special allotment every year even by curtailing, if necessary, the expenditure to that extent on higher vernacular education of a purely literary kind in rural districts.

The question of finding teachers for the agricultural schools is even more important than that of finance. There are now a number of Agricultural Colleges in India and the Simla Conference resolved that each Province should have one such College. In these Colleges there are two courses, one for 2 years and the other for 4 years. At present the men who are trained in the Colleges are mostly absorbed into the Agricultural Department. This policy should be changed. The men undergoing the four years course may all be taken into the Department, and from those who take the two years course a good proportion should be made available for teaching in the agricultural schools. The number of students admitted to the latter course can be increased to at least 40, without much additional cost of lectures and appliances. Of these students at least 30 may be expected to pass out every year and of them 10 should be taken into the Department and the remaining 20 should be employed as teachers in agricultural schools. If this course is adopted it will be possible to open at least 10 agricultural schools every year in each Province 2 teachers being employed in each school.

The students taking the four years course should be so trained as to be able to rise even to the higher rungs of the ladder of Agricultural

Service and to undertake scientific investigations in different branches of agriculture and the allied sciences after a further course for a year or two of post graduate studies. Such men must naturally possess a high standard of general education and admission to the four years course may, therefore, be restricted to graduates of Universities and preferably those who have secured a high pass in the sciences in the degree examination. The men who pass out of this course must be granted a degree in agriculture, the Agricultural Colleges being affiliated for the purpose to the Universities.

The students who go in for the two years course need not possess such a high standard of general education as those who take the four years course. All the same, since they are intended for serving in the Agricultural Department and for teaching in the Agricultural schools I would prefer for admission to this course candidates who have passed the School Final or some other equivalent examination. There is an impression in some quarters that much general education is not necessary for the lower subordinates of the Agricultural Department. From my experience of such men in my own Department I find it impossible to endorse the above view. Men without a high standard of general education, but only trained in agriculture, are not altogether bad; but those who combine in them good general education and agricultural training are always found to do better. The School Final men are ever on the increase, any number of them are without employment, and why not make use of them for agricultural work and agricultural teaching? These men are ready to accept clerks' posts even on Rs. 10 per mensem. If after two years' training in an Agricultural College they can get a start of Rs. 25 or Rs. 30 with prospects of rising to about Rs. 100 or so in the course of their official career very many of them will willingly join the Agricultural College. The teachers in agricultural schools and the lower subordinates of the Agricultural Department, except the maistries, peons, and menial servants, should certainly have prospects similar to those of the Sub-Overseers, and Overseers of the Public Works Department, the Hospital Assistants and Sub-Assistant Surgeons of the Medical Department &c. If such prospects can be held out in the Agricultural

Department there will surely be no difficulty in attracting School Final men to the two years course in Agricultural Colleges.

As already stated, by the adoption of the course suggested above 20 teachers in agriculture can be produced every year in each Province, and with them at least 10 agriculture schools can be opened. These schools are solely intended for training men for practical agriculture, men who will go back to the land and engage themselves in cultivation. Appointment-seekers should not be allowed to contaminate the atmosphere of these schools and poison the minds of the innocent boys who wish to develop into practical farmers. No hope of entering Government service should be held out to these boys and very great care should be taken from the start to admit only boys who are prepared to devote their life to agriculture. Such boys can be had in plenty everywhere and there need be no anxiety on the score of paucity of students for admission to the agriculture schools. I speak from my experience in Travancore and conditions in British India cannot be far different from those obtaining here. Admission to the agricultural schools should be open to boys who have studied up to the fourth standard in vernacular schools and who are not less than 12 years old. The medium of instruction should naturally be the vernaculars, and the boys must have had sufficient general education to be able to read and understand ordinary books in their own vernacular. To each school must be attached a farm of about 5 acres which must be divided into plots and distributed among the students for cultivation. The instruction given in the schools must be as practical as possible. The boys must not be made to cram up books. In fact it is better to avoid the use of text-books altogether. The teachers must read up books, take notes, and instruct the boys in the elementary principles of agricultural science. The instruction thus given must be impressed on the minds of the boys by corroboration with their own practical work on the farm. Every item of work on the farm must be attended to by the boys themselves, and as an encouragement to them they must be given the produce of their own labour. The boys attending each school will be drawn from the neighbourhood of the school itself, and it will not be difficult, therefore, to insist on their attendance in the

school early in the morning and remaining there till evening with a couple of hours interval in the mid-day. Both in the morning and in the evening they must attend to farm work for 2 or 3 hours and in the interval they must be given lessons in the class room for 3 or 4 hours. The course of training must extend over at least 2 years, and the backward boys must be kept on for another year or so, the ultimate object being to fit him for practical agricultural work on improved lines when they leave the school.

The school that I have in contemplation is more or less after the model of the Loni Agricultural School in Bombay Presidency with this difference. In the Loni School the boys permanently reside on the farm itself and are fed at Government cost. With regard to the school that I suggest the boys are not required to live on the farm. But since they will mostly be of the poor classes, it may be necessary to provide them with mid-day meal on the farm and that at Government cost. By supplying one meal a day to the boys and allowing them to stay in their homes in the night instead of making them live on the farm and feeding them at all times, the expenditure on the school can greatly be reduced from what it is at Loni, without impairing the efficiency of the training. The Loni Agricultural School is, no doubt, an excellent institution, but the cost of maintaining it is so great that no Government, however strong its finances may be, will be in a position to open a sufficient number of such schools so as to bring agricultural education in the near future within the reach of the whole rural population which is naturally the goal to be aimed at. A less costly, but not less efficient, scheme has to be formulated if the goal is to be reached within the next one or two generations. I have given some thought to this question and arrived at the conclusions described above which I place before the Madras Agricultural Students Conference for consideration.

N. Kunjan Pillai.

Discussion :—

Requested by the President of the meeting Mr. Wood, who had just returned from Simla after the Educational Conference there, briefly enumerated the various views current on the subject and observed that

the teaching of a concrete subject like Agriculture as against a purely literary one demanded a greater and more detailed attention from the teacher and thus necessitated comparatively smaller classes. He had made a rough calculation and found that the staff required would be roughly six times that required for a literary subject. He emphasised the importance of Agricultural Research for improving the quality of teaching at the College, and mentioned that in one of his recent tours with the students, he came across two entirely new crops not known to the Department till then. He would, for some years to come, attach great importance to Demonstration work which would not only bring well tried improvements to the very doors of the ryot but was also likely to serve as an advertisement for the College and stimulate the influx of the right sort of material into its portals.

Mr. M. R. Ramaswami Sivan suggested that, by a system of co-operation between the Educational and Agricultural Departments, experienced Farm staff might be *lent* from time to time to serve as Agricultural teachers in the Government training schools. It often happened that men who could not get a berth in the Agricultural Department started service as Agricultural teachers in the Educational Department with little or no practical experience, and that they frequently got disappointed because of the limited promotions. The scheme, he suggested, was exactly similar to what obtained in the Engineering and Medical Colleges.

Notes and News.

During the month, the games captain was busy organising matches. On the 5th of August our team met the Young Men's United Team in a Hockey match. It was a well contested match and our opponents would have put in a goal but for Mr. Parnell and our splendid backs. Just before the close of the match, we pulled up and put in a goal, so winning the day by one goal to nil.

On the 7th we again met the above team in a football match. During the 1st half, our forwards now and then attacked the goal