Co-operation and Agriculture.

I am highly obliged to Mr. Krishnamurthi Rao and, through him, to the Madras Agricutural Students' Union for having allowed me to place a few thoughts before you on this occasion, touching the relationship that ought to exist between the Department of Agriculture and of Co-operation. That means things are not quite what they should be, and it is needless to mince matters. Both these labour pretty much in the same field of activity-the Rural side of India. Both have similar or same aims before them-that of making the ryot thrive. We differ only in the means employed. Your aim is to better Agriculture and you set before yourselves the finding out of methods by which the soil may be improved, the supply of water ensured. the manure made nutritious, the implements rendered efficient and cheap, the seeds 'fattened,' noxious weeds and 'puchis' exterminated and the labourer's toil rewarded with bumper harvests. We propose to find for the ryot the wherewithal to do all or some of these things in the usual course. You make various kinds of experiments to ensure particular results and, when you are satisfied that this or that measure may safely be recommended to the ryot for adoption, you send out a subordinate or two to persuade people here and there to adopt your ways. Generally, the adoption of these ways means money and we trouble to find that for the ryot on fair terms. We were both born about the same time and are of the same age now.

In these circumstances, therefore, one would expect us to have already arranged to co-operate with each other and ensured highly beneficial results to both. But what is that we have been doing till now? We have been systematically ignoring each other's existence and have at best fought shy of each other.

^{*}Paper read by Mr. C. N. Krishnaswami Iyer M. A., L. T., before the College Day and Conference on 12th July 1915.

Missionaries of agricultural improvement have spoken and written about various matters—Single seedlings, Green manuring, Fish manure, Cambodia cotton, Sugarcane of rare virtues, Fungus diseases, spraying of vitriol and all that sort of thing—but, in most cases, there has not been so much tangible result left behind as could fairly be expected, because there has been little of system in this propagandist work. To speak to the ryots assembled at a cattle show or to a few absentee landlords gathered at an agricultural Association, once in a way, can hardly lead to any permanent good, and so far it has not been possible for you to do otherwise.

We, on the other hand, have had our attention confined to finding the wherewithal for the ordinary ryot to exist—to supply money for his small but vital needs, to enable him to live while the crop is growing, to buy a pair of cattle if he needs them, to pay his kists, to free himself from prior and usually oppressive debts, to do some petty trading or artisan work or to marry if he likes. Here and there our money buys good seed or green manure, but that is a rare exception. It is therefore clear that we have not cared to realise your existence either, although both have been working so close to each other. It certainly looks strange, but is nore the less true.

I call this a *Pindaree* state of existence. That may be a necessary stage in the growth of every institution, but the time has surely come for it to give place to regulation of some kind, as between ourselves. I accordingly venture to make a few suggestions for your consideration and, if you find them worthy, for translating them into action.

First, with regard to experiments g. The Central and other Farms scattered over the Presideucy are doubtless doing much useful work and in course of time the effect is bound to be highly beneficial to the agricultural interests of the country. But you

know best the limitations under which the Sircar agency has to work and its strong and weak points. They need not be detailed here. It is not hereby meant to cast reflections on all or any of the estimable persons who 'run the show' now—farhtest from it. I happen to have the pleasure of close acquaintance with several among them and I know they are actuated by the best of motives in all that they do, and labour in very truth con amore, but they cannot rise superior to the limitations of the system in any case.

Experiments conducted solely by means of departmental agency, therefore, have at all events to be supplemented by those undertaken by intelligent ryots here, there, everywhere. though under the lead of experts, if results should be reliable and useful to the ryot class. This is not my idea but an opinion deliberately expressed by one of the best experts at Pasa. Only that gentleman lamented the absence of pliant human material here to co-operate with experts. Well, I am here today to urge that the human material needed does exist and exists in a fine and ready form, and you have only to make use of it. It may be found wherever the Credit movement has succeeded in establishing itself. We have now got nearly 1500 Credit Societies scattered over all parts of the Province and among them you may at least count a hundred or more whose Panchayatdars are the sort of men you want. Approach them and make a beginning-I can assure you it will be under the best of auspices. Only, let not the expert forget what I call the 'milk-before-meat' principle of presentation in dealing with these men. Time was when experienced administrators deliberately wrote that there was not one honest man among our rural & k, that mutual trust was unknown among them and all that the d of thing. But now we may all be glad to note that that assertion has been proved unfounded and that this Presidency is better fitted for the spread of the Credit movement than many countries of the West!

As in the case of the Credit movement, so in many others. Several suggestions are now in the air to revive Rural Life—the constitution of the Village Panchayat or rather its re-constitution, and the management of several items of village administration through it, such as Village Sanitation, Village Police, Justice, Village Forests, &c. I only add one more—Experimenting in Agricultural matters to be carried on by means of Village Panchayats. I can give names and point to places where a beginning may be made with high hopes in simple experiments, touching seed varieties, manuring, rotation and the like. Put them in the way and make them attend to one or two things at a time, and you are sure to be rewarded well. Proceed from simple to complex, and you will be proceeding on right lines.

It is just here that some bit of plain-speaking is needed and friends must excuse me if they find it gall and wormwood. The worst of tyrannies, once said the late Mr. Stead, is the tyranny of experts, and I fear there is ample justification for it if we look about us. Experts do not cultivate sympathy and, in the lower ranks at all events, their heads often touch the stars. Take, for instance, the case of an irrigation channel under a P. W. D. subordinate. He believes so strongly in his 'system,' his 'gallons,' the diameter of the supply tubes and other such apparatus-all based on fine mathematical calculations-that he will rather let a whole harvest go to waste than alter some plan to suit unexpected contingencies! And so with other experts also. I seriously propose therefore that every technical college must provide for some training in what may liberally be called 'humanities,' that those who go out of it may be somewhat humane in their ways.

The College of Agriculture was at have reason to think, conceived and worked in this same arrow spirit once, but all that, one is sincerely happy to see, has since altered and the new race of experts turned out by the present Institution, have

every chance of doing well, for they are, I know, being trained to inhale first and then to exhale, and this makes a world of difference. It is a good-old rule to follow, and I believe you are on the whole inclined to follow it. Whatever the merits of abstract Science, it is of small use to the ryot if he cannot adopt the suggestions which Science approves. He wants not indeed to live in the best possible world, but the best possible for him. And whatever effort we make in this behalf must be subject to that limitation. This means that a careful process of taking it must be gone through before you give out. Nothing is easier, for instance, than to call the ryot names and pull his methods to pieces. But, when a Dr. Velincker tours round, he has so many good things to say of the Indian ryot and his methods. Experiments have therefore to be conducted on the basis of what exists and what is possible, and for such experiments to be successful, the co-operation of intelligent ryots is, I believe, the first essential. The Credit movement, let me repeat, has brought a number of them forward and the time therefore has come for you to enlist their sympathies in this direction. Make them begin on lines agreeable to them, and you have every chance of doing the right thing by the right method. Set before them, on the other hand, things which are not quite clear to them, though sun-clear to you, you go the wrong road. They may oblige you so far as to make some mechanical effort but, their hearts not being in the business, the experiment ends in nothing.

The single-seedling method in respect of paddy transplantation is a case in point. It was proved to the satisfaction of many ryots that it would be the right thing to do if you wanted fine harvests and some saving. In the ryot turns round and asks what about the fodder value of the stuff? That is an important question—that one of the important bye-products of paddy cultivation suffers. You will have to satisfy the ryot how

this defect is to be remedied or you may be sure he does not care for the experiment.

Similarly in every other case. All our experiments must be considered in their bearings upon the existing position of affairs, with a view to improve them, lest they easily become or be regarded as ludicrous. Fools always need the compliment of being consulted and, if we fail to give it, we are easily made fools of. Misrepresentation is most easy in agricultural experimenting and sound methods may easily be described as those meant to extract sun beams out of cucumbers or grapes out of thistles. So much for experiments.

Next in regard to the important subject of Agriculture. Now that a net work of departmental institutions has been organised over the whole of this vast continent, there ought to be thousands of opportunities for comparing notes, and for frequent publication of reports and leaflets and pamphlets. As a fact, you have done and are doing a lot that way-the Calendar, to name only one. As yet, however, you have not found the right agency to place information before the ryots as it deserves to be. To ask the village munsiffs to circulate the papers among the people of the village-you all know what it means. On the other hand, where the Credit movement works well, ask the panchayet to help you and they will do it infinitely better. When people meet for banking purposes, leaflets can be read out and assimilated in a spirit which no village munsiff can infuse. Where, on the other hand, the credit movement has done well, there the reading room quickly comes in and the village schoolmaster is found busy reading to the ryot. That is a capital organisation for the spreadof agricultural knowledge and will not be justified in ignoring its existence. Your aim stands a good chance of being steadily, if slowly, realised in case you ask credit societies to co-operate, not otherwise. As a small instalment of what is sought to be urged here, the Coimbatore District Urban bank which has

got relations with all parts of this district and with Malabar and Nilgiris, has provisionally agreed to distribute green manure seed and has done some sale also. Now imagine most of our important villages provided with credit societies, as they are bound to be in course of time, and each R. C. S. providing green manure seeds for its own consumption, and the District Urban Bank serving all these societies wholesale-I trust you will agree that there will then be a system about it which no other alternative plan of yours can give. Similarly with regard to sale of good seed, of implements, of new plants and to diffusion of knowledge. It is a great thing to have an organisation ready to help you, and that organisation we claim to have already found for you. Co-operation as you know covers a much wider field than yours, and so properly speaking you must be content to serve as its handmaid. So far from it, you have been indifferent to its existence all these years and show no sign of bettering your relations with it.

As one instance of the unfair treatment which co-operation has received at your hands, I cite the small presence of books on co-operation in your Library. Now I ask in all seriousness if this is as it should be. I call this specialisation with a vengeance and it seems to bear a close resemblance to that unfortunate illustration on division of labour with which Prof. Walker begins his political economy-viz. that a man can be a Chemist and sell deadly poisons, but at the same time has no right to say that concentrated prussic acid is death to drink! Please therefore let your library extend its arms to a few books on co-operation. Just a few, mark you, to give experts in Agriculture an idea of how best their expert knowledge may fructify with the aid of co-oper on. I have not a clear idea of the curriculum of studies as it as esent obtains in this college but I am told it is eminently, pratical and I am so glad to learn it is so. That is just the reason in my opinion for the addition of a little bit of co-operation as part of their stock, and perhaps a little bit of land tenure as it obtains in our own parts. It is merely

a suggestion, which may be taken for what it is worth, coming as it does from a non-expert. I half-recollect having heard from someone that these things are already included in the curriculum, and provision has been made to give lessons on such subjects. I shall be satisfied if the authorities agree that they are essential and see that some thing more is done for them.

If Co-operation and agriculture learn to help each other in the two great lines of experimenting and propagandism, many other useful results may be expected to follow in the usual course. Common purchases and sales are the most obvious. Cattle breeding, poulty breeding, bettering of dairy products, market gardening, cattle and other insurance, increased use of machinery—all can be improved indefinitely if we agree to work together and help each other. Anybody who cares to read Mr. Wolff's Co-operation in agriculture, finds what a vast field for improvement lies before us, if we but care to stand united and work.

I feel I have tried your patience long enough and shall be glad to stop here. You will observe, I have not said a word about the marvels which co-operation has wrought among Western people—conditions are so different. Here is however the conclusion of an English writer on Co-operation. After having at great length considered Co-operative Societies formed for this or that purpose, the writer concludes:—

"Europe is an old and thickly populated continent, and its cultivation is becoming more intensive. The opening of Trans—Atlantic markets within the last half century or less, has tended to confine Western Europe just to those forms of intensive cultivation in which small farming is strongest. Meat, wool and cereals are being imported in increasing quantities from other countries; and their place is being taken by costly products or by products requiring immediate consumption or consumption close to the place of production; that is to say, the range of the small farm specialities and the range of the cultivation into which the development of the world's markets is forcing Europe, approximate very nearly to one another.

We may therefore present as our broad conclusions (1) that statistical evidence proves the vitality and slow expansion of other forms of cultivation than what we call distinctly big, and in particular of small cultivating ownership; (2) that the province of small-scale farming is permanently assured and capable of expansion; and (3) that this expansion is directly stimulated by the trend of international agriculture. Combining these results with those of previous chapters, in which we have shown the supreme importance of Co-operation to the small farmer in particular, we may submit that Co-operation is not only a but the corner—stone in the development of modern agriculture."

Mutatis mutandis, this conclusion seems to me to be true also of the continent of India and of the ryotwari Province, which is ours, in particular. If so, do you do well, I ask, to fight shy of us? It is doubtless your immediate care to make two blades of grass grow where there was but one, and put two grains into the ryot's store when he has to be content with one now. But surely this bettering of production is one of many links in the chain of modern Economics, and he who would really better agricultural production, has to look about him and find how this bettered state of things, he has in view, fits in with the course of Industrialism as a whole. If it does not fit in well then, depend on it, the very efficiency which you labour hard to bring about, may become your bane. Accordingly, I believe I have made out a case for the study, by the agricultural expert, of the element of Economics and of Co-operation in particular.

Easy method of preparing lime manures required for Tanjore paddy soils, through Co-operation.*

The Research Institute attached to the Agricultural College, Coimbatore has analysed samples of soils in the Tanjore Delta taken at

^{*}Note read by Rai Sahib Mr. A. Sethurama Iyer, Diplomaed in Agriculture, before the College Day and Conference on 12th July 1915.