

district which could well be improved before introducing others from outside.

The causes of insect pests, the methods of their spread and simple remedies for them are things of which the ryots have no idea and their education upon these elementary principles would be of much use in modifying the evils, such as by the co-operation of the villagers in using bags for grass hoppers and bugs and also in the use of light traps for stemborers and other similar remedies.

The trial and introduction of improvements in Government farms is the first step. These and other improvements of recognized merits must be carried out in the estates under the Court of Wards, which would form centres from which they would extend in all directions. For efficient work and real improvement, it is highly beneficial to have the staff of such estates manned by men with good agricultural experience and knowledge of scientific agriculture.

The importance of co-operation among the villagers and the vast scope for improvement by the starting of co-operative agricultural societies in every village can never be overestimated. Rapid progress is being made with the efforts of the co-operative department. Still their energies are directed to banking and credit side and once people have understood the importance of this movement and have also learnt the advantages of prompt repayment and business methods, co-operation in agriculture is an easy step. Co-operation will facilitate the rapid extension of the many possible improvements suggested above.

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### **\* The Madras Agricultural Students' Union.**

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The report read by the Secretary covers the ground of the working of the Union during the last year. I thought it necessary to bring into prominence the principles on which the Union was brought into

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\* Being summary of paper read by Mr. M. R. Ramaswami Sivan, B. A., Dip. Agri., at the last Agricultural Conference held in July 1914.

being, especially as there is a tendency for several members to think that the 'tamasha' of the College Day and Sports and the holding of the Conference are the only events for which the Union is responsible. I had the honour and privilege of being associated with this Union from its very inception and I have contributed some thing, ever so little, towards the evolution and working of the Union. I know the bright side of the Union and I also know its failings and I propose to review the work so far done, then point out where we have not done very well and why we have not done well and lastly throw out some suggestions for the expansion of our work.

The objects of the Union are :—

- (1) To encourage an *esprit de corps* among its members.
- (2) To exchange opinions and experiences in matters agricultural and to make a record of the same.
- (3) To act, as far as possible, as a bureau for procuring employment to members of the Union.

The first object requires that we should, in the first instance, create an *esprit de corps* and secondly to maintain it. As Sir John Atkinson said in his presidential address of 1912, we cannot have an *esprit de corps* unless we have a common cause to serve; and that cause has apparently for its foundation an attachment to the *Alma Mater*. We expect, therefore, everyone who has passed out of this college and of everyone directly or indirectly connected with the institution to take a pleasure and a pride in owing the college as his mother—a mother who has given him milk of knowledge or the means of subsistence. One often hears the remark "What has the college done for me that I should have a loving attachment to it?" Such a remark comes mostly from some of my fellow students of Saidapet who, for want of opportunities or openings for an agricultural line in those days, have as a necessity been obliged to eke out their livelihood as Pleaders, Salt Officers or Local Fund Overseers. I had, in my own case, nearly dropped into that category. Saidapet students were often obliged to take to professions other than agriculture, only for want of

openings and opportunities. The Government of the time helped in the straying away of these men from agricultural pursuits by declaring the Diploma in Agriculture as equivalent to B. A., for purposes of appearing for the Revenue and Criminal Tests on one side and by circulating passed lists of students to the District Collectors for appointments. The grant of stipends and the shunting of Revenue Department clerks for training at an advanced age were also responsible. I, therefore, request you not to condemn such men for not taking up the professions for which they were trained. The wonder is that, in spite of these disadvantages, there have been several men who have taken up to agriculture as a profession.

Now every one trained at either of these colleges, whether he is in the profession or not, whether he was a casual or a full course student, should feel his bounden duty to feel and to maintain a love for the college. This can be done much better in a corporate capacity; and the Union has been organized to fulfil that function. A sense of solidarity and brotherhood must be felt by all, high-placed or low-placed, old or young, full of experiences or recently recruited. Only then can we say that we have created an *esprit de corps*. To maintain it requires constant work, done day after day and year after year. The annual functions of the College Day, Sports and Conference have to be understood in the spirit that they are the means of bringing together past and present students and others who are interested in our work. The daily work entails almost completely on the resident members of the Committee, and such work cannot be done unless officers who have little leisure beyond their official duties are prepared to make some sacrifice—sacrifice, especially, of time. The Working Committee, after all, can do little if they are not helped and backed up by the mossil members of the Union. The purpose of my paper will be served if, at the election of the office bearers to take place this evening, officers will offer themselves for work like Municipal Councillors, rather than wait for offices being offered to them. For I am of opinion that a person of mediocre abilities who is willing can do more work than another who may be brilliant in his own way but unwilling to exert.

The work of the Union also consists in recording and circulating opinions and experiences in matters agricultural and for this purpose the journal was brought into existence. As the officialy recognised editor of this journal, I have always felt that the journal is rather scanty with regard to the publication of practical agricultural experiences. It fulfils the function of "college news," in a way though belated. In order that we may have such practical information we require contributions from all those who are directly connected with practical work in the department or outside. Even a full timed editor requires help from outside contributors and I am constrained to remark that, except in a few cases, little response was received in the shape of contributions in spite of general and special requests. It cannot be said that there is a paucity of men who can contribute useful matter to the journal. I had the privilege of judging the essays for the Munagala prize and I found several useful items of information based upon observations and practical experience in them. Writing an article probably requires a greater thought and some literary taste. But we, as agriculturists, want the matter and may even ignore the manner and style. Enquiries made of a labourer in the field have to be sifted, gleaned, put in accurate terms and posted. All this means labour and trouble, and, without the bestowal of much trouble and labour, no useful work was ever done in this world and a journal worthy of this institution cannot be put forth; and the help of old students and present students, of Zemindars and landholders, and, last but not least, of the heads of the different scientific sections, is urgently required and earnestly solicited.

With regard to the third object of the Union, we have done practically nil and probably we are not likely to do much. Were it not for the references made from time to time by the Principal or by the Director, we could not have done even the very little we have done. I am certain I am voicing the opinions of the passed students of this college that they are much indebted and feel grateful to the Director of Agriculture for the liberal scale in which he proposes to reorganise the Department. I have sketched the nature of Zemindari service in my own case. Court of Wards' service is a little better but not much more so. A passed man prefers to enter the Madras Agricultural.

Department even on an initial small salary to taking up private service, because permanency of service, chance of being appreciated and prospects of advancement, from time to time and from grade to grade, are assured in the former case.

While we look to the Agricultural department in Madras for most of the appointments for the members of the Union, a small number will take up private farming; but there will be always a certain number who will go in for service under Zemindars, Court of Wards and Landholders; and we would request them to consider the disabilities of service under them when they offer appointments. If one cannot pay well, one cannot get a good man; and an inefficient man will have no power of initiative to stem over difficulties of all kinds which are sure to be met with in pioneer work, especially in Zemindari tracts. This word "pioneer" brings in, to my mind, that we are meant by Providence to do pioneer work. The population is increasing the area of cultivation is limited and there is little or no land available on darkhast. Therefore, more food material must be produced out of the land by intensive cultivation and this work devolves on us. We may experiment and may either fail or succeed; but we must succeed in the end. We may not be able to reap the harvest of all our labours. Men who plant trees do not all hope to eat the fruit thereof. The trees have been planted more for the descendants. Similarly the work that we do is pioneer work or preparing the way; and we, the Members of the Madras Agricultural Students' Union, consisting of present and past students of this college, with the cordial help of the scientific experts on one side and the enlightened Zemindars on the other, associated with us as honorary members, certainly form a nucleus of an association which can do this pioneer work in an efficient manner.

With regard to the expansion of our work which is bound to occur sooner or later, we may bestow some attention. First comes the necessity of converting the quarterly into one of a shorter interval, say monthly. A monthly journal requires more constant application of work than a quarterly; but there are several advantages. News can be supplied fresh. The journal may not contain as many pages as the

present one; say 3 or 4 forms instead of the present 8 forms. A small printing office, such as is available at Coimbatore, may be able to undertake it and print more punctually and promptly than we had the fortune so far. The cost of production and distribution will be greater but not proportionately more so. There will be a saving of half the postage as the Postmaster-General grants concession in the case of monthly journals, which is not extended to quarterlies. There may be an improvement in paper and general get up of the journal. Copies may be sold at Rs. 3 per annum. I have made calculations and find that 500 subscribers paying at the rate of Rs. 3/- will make it self-supporting. All the members of the Union,—and, according to the Secretary's report, there are over 260 members,—take a copy and pay for it, including the Editor and Manager. There are nearly 200 other subscribers already on the list. One of the first means suggested to the Committee of the Union was to ask for Government patronage, by requesting them to subscribe for a copy for each Revenue officer of and above the rank of a Tahsildar and for each Educational Institution above the grade of High School. The journal will certainly be useful to them. But have we made the journal as good as it should be? Have we tried all our own resources? May we not, each of us, members of the Union,—and we are over 260—promise to secure one additional subscriber on the average, by taking some trouble? When we have done all we can do, it will be time enough to ask for Government or other help. We must make the journal generally more interesting with a greater variety of matter, and the first step is, in my opinion, the conversion of a quarterly journal of 8 forms into a monthly of 3 or 4 forms.

As the President of the Union remarked during the last Conference, the Year Book of 1911 blossomed into a quarterly last year, and I hope, it will ripen into the fruit of a monthly journal this year.

With regard to the procuring of appointments for old students we have acted hitherto only as a forwarding agency. Can we do nothing more? Of course we cannot create appointments, except one or two very rich members here and there. But can we not

help in equipping a promising and distinguished student occasionally, with the means of acquiring a superior education, say, in a foreign country or a Post-graduate Education in India. In addition to the greater knowledge possessed by a man trained in a foreign University, he has a broader outlook of life and his services will be more largely in demand in the newly organized and constantly expanding Departments of Agriculture in India. The help that I have in view may be similar to the scholarships awarded by the Indian officers' Association, Madras. A certain small percentage, say half to one cent., of the salary is levied on willing members drawing a certain minimum salary and the collections are lent to a promising student. His life is insured for the amount he borrows and the premium is paid during the years of his absence from India. The policy is assigned to the Association and a stipulation is made in the agreement that the loan will be repaid at stated instalments after taking up service and that the policy will be reassigned on the payment of premia advanced by the Association. This entails no loss to the Association, except the loss of interest. Several brilliant men of the Madras University have benefited by these scholarships and have got suitable appointments in the different services. Being a smaller number of officials and receiving comparatively smaller salaries, we, the Members of the Madras Agricultural Students' Union, may not be able to get as much money as will be necessary to meet the expenses of education of a man in a foreign country every year. But we do not apparently want it; we do not have berths for such a large number of men. If we find means to send a man, say, once in five years and probably, even then, only to meet a portion of the expenses, it will be more than ample. And all the time we are helping him, we should remember that, after all, we have only given him a loan and, in future years, the repayment of these loans will help the Union in meeting a larger demand and with larger amounts.

The affairs of the Union are in the hands of a Council consisting a President (the Principal ex-officio), 4 Vice Presidents and 12 members,—3 Vice Presidents and 7 members being from the mofussil. The function of this Council, Advisory Board as it were, is to direct the work of the resident Working Committee and help the latter in several ways. May we appeal to their sense of responsibility by asking them to enlist new members to the Union, supply correct addresses of old students, obtain fresh subscribers to the journal and contribute matter regularly to the same. The appeal is made to all the members, but more is expected from the Council members.

I have also the wish that membership in the Union should grow to be, in course of time, a passport and introduction from one part of the country to the other. For instance, if a member in one locality wants urgently some seeds, plants or agricultural information from another locality where a member of the Union may be living, he may apply to that member and get what he wants even quicker than through the Department. Again, if a member should happen to be touring, on business or for pleasure, in a new locality, his membership of the Union should be a sufficient inducement to him to call on a member of the Union who may be living in the place, and exchange ideas with him, for each other's benefit.

I am also suggesting that old students of this college who are living in convenient proximity, but cannot attend the College Day at Coimbatore, should meet and celebrate the Day in their own place, thus showing that, on that festive day, they are in spirit with us here.

The Union is only 4 years old. Based on the traditions of the old Saidapet College and of this newly expanding Coimbatore College, the foundations of this Institution have been well laid and we will all help in erecting a superstructure worthy of our



*Alma mater* whose approbation we will all care for, expressed in the words "well done, my boys".

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### **The Cultivation of the Apple.\***

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The apple is one of the most important staple fruits of the world. The plant is grown in sub-tropical and temperate regions throughout Europe, United States, Australia and, to a less extent, in India. The plant could be grown here at elevations between 3,000 and 7,000 feet above sea level, with a rainfall of 30 to 50 inches.

The land selected for the garden should fulfil all the conditions necessary for any good cultivation with facilities for irrigation and drainage. It is certainly better if the site is situated near a town or any commercial place, so that marketing the fruits may be easy. Red loamy soil with a little lime in it overlying a bed of gravel or laterite would suit apple very well. It is well if the land has a slope, and the slope faces the morning sun. It should be protected from wind, lest the young plants suffer and the old plants drop their flowers.

In the way of preparing the soil there is nothing particularly to be done for cultivating apples. They require no shade trees. The land should be cleared of all the trees and their roots removed. If the area is small it may be dug up, or the land may be ploughed deep and taken out. In the first year a leguminous crop may be grown with advantage as this will keep down the weeds and besides this the nature of the crop will give us an idea of the fertility of the soil. While this preliminary crop stands, odd works, like trenching and fencing, may be got through.

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\* Being summary of paper read by Mr. H. C. Javarayya, L. Ag., at the last Agricultural Conference held in July 1914.