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The College Convocation.

The annual Convocation for the purpose of presenting Diplomas and Prizes was held on 30th March in the big Lecture Hall, the Director of Agriculture, Mr. D. T. Chadwick, I. C. S., presiding. Besides the staff, officers and students, a good number of prominent gentlemen of Coimbatore were present.

The Principal, reviewing the work of the College during the year in the various classes, said that it was a source of great satisfaction to him and to all of them that this year witnessed the largest number of Diplomas during the last 5 years and that all the students who presented themselves for the final Diploma Examinations came out successful, although it was a pity that student N. R. Srinivasachari had to be absent from the Examinations on account of illness. He further said that personally he was of opinion that,

although all the students passed, the quality was not quite so good as last year and warned the present students against presuming that it would be a mamool in future years to pass all who sat for the Examinations. He impressed upon the outgoing students the important fact that the Diploma was not an end in itself, but was only a step towards acquiring knowledge in practical life and hoped that the instruction they had received at this institution would stand them in good stead in the pioneer work which was awaiting them. He was glad to find that class II had done very well so far and was full of hope that they would put forth their full energy during their third and final year. As regards the new class I, it was very gratifying to learn that the Deputy Directors had reported very favourably about them, this being attributed to the increased amount of practical work done by the class in the field. He asked the students to remember that they owed a great deal to the Hostel Warden, Mr. Tadulingam Mudaliar, for all the comforts they have had.

On the games side, tennis and, more particularly, hockey were the all-absorbing games, the peculiar time table of the college not admitting of students of all classes assembling for cricket as often as in other colleges. One new tennis court had been laid with the help of Government, and he proposed to apply for sanction for an additional court. The Cecil Wood Tennis Cup, instituted by Mr. B. Dwarakanath, was won by K. Rangasami Pillai of class I. In hockey a number of matches were played during the year with outside teams in most of which the college won and colours have been awarded, for the first time, to the team.

The Principal, before requesting the Director of Agriculture to present the Diplomas, mentioned that it was in contemplation, at the request and suggestion of some parents of the students, to institute the system of private tuition or coaching for some of the backward students.

The Director of Agriculture then presented the Diplomas of Licentiate in Agriculture and the Prizes to the successful students :—

Manga Razu, K.	Sankunni Menon, K.
Manickam Mudaliar, V.	Sitararam Patrudu, S.
Muthayya Nattan, M.	Viraraghava Rao, M.
Narasinga Raju, G.	Viraswami, B.
Pranartiharan, S.	Vittal Rao, U.
Ramaswami Aiyar, T. S.	Vyasarajan, C. P.
Sankarakumar, L.	Yesudasan, A.

Robertson Prize for Proficiency in Agriculture. Gold medal. S. Sitararam Patrudu.

Clogstoun Prize for General Proficiency, judged by class marks. Gold medal. M. Viraraghava Rao.

Keess Prize for Proficiency in Agri. Chemistry. Gold medal. M. Viraraghava Rao.

Close associate for the Keess Prize:—Books. Viraswami, B.

After presentation, the Director of Agriculture delivered the following address :—

MR. WOOD AND STUDENTS AT COIMBATORE :—

It is a great pleasure once more to come again to Coimbatore and, at the end of our College year, to wish good luck to another batch of students finishing their Agricultural course. And I understand that some of this year's students merit our congratulations in a peculiar sense. Some have done very well and those we congratulate wholeheartedly in the customary manner. It is, moreover, a matter of great

satisfaction to find some Telugu boys well to the top this year and I hope that Telugu lads in the other years will strive hard to maintain this relative position. But so I understand, never in any previous years have so many students avoided the dark abyss of failure by so narrow a margin. And whilst we wonder at these tactics and congratulate them upon their success, yet we cannot hold up their achievement as an example for succeeding years. We are all honestly glad that they have escaped the disappointment and humiliation of failure, but it is not sufficient in life to scrape through. Personal satisfaction in one's own work varies with the thoroughness and excellence with which it is done. The same two qualities in our work also determine the degree of confidence and respect we can command from others. And I hope that each succeeding batch of students at Coimbatore will see to it that they put the standard of work higher and higher and so stimulate the years that are to follow, to greater efforts.

It is not usual at this stage to refer to the doings of those who are still in their second year. But the second year deserves both a word of commendation and a word of warning. At some of the Diploma examinations which ordinarily come at the end of their second year, they have done exceedingly well—especially in Chemistry and especially in the practical examination. This is most satisfactory and promises well for the future, but they have still a year to go and I most sincerely trust that, during that year, they will not allow any wrong sense of security to weaken their efforts or lessen their strivings. Success in life rarely falls to those who make an occasional spirit and then relapse into

somnolence. We shall all be interested to watch how the present second year meets its coming tasks and I hope that we may not be disappointed.

Last year to the students that were then leaving the College, I endeavoured to give a short motto to aid them in their work in Agriculture, viz:—*Courage and Caution, caution to think out carefully their reasons for adopting any line of action and then courage to act and courage to defend it.* It is not sufficient to intend to do the right thing, it is above all things necessary to convert intentions into actions, and to see that the thing needed is done. Also it is, above all things, necessary for you who go out, to apply new ideas to practical farming, that you have thought out your reasons for the advice you give and are prepared and ready to defend it with good reasons. Nothing gives me greater pride in this our College or fills me with greater hope for its future than to hear our students described as *courteous, respectful, able to speak out*, ready to give the reasons for what they think, not wathercocks blown about by any assertion. To this year also I would try to give a short motto which I would ask them to remember, viz:—*Farmers first.*

Agriculture is the most ancient and most honourable of the world's callings. Lawyers, priests and schoolmasters, traders, inventors and engineers only appear in a State's history after a start has been made in agriculture. It is above all things honourable to apply trained common sense to increasing the productivity of the earth on which ultimately all human activities depend. And that is what

scientific agriculture is. It is no abstract science, no figment of the imagination woven by sedentary philosophers, it is the application of knowledge and trained common sense to practical farming. And I hope that all who leave these halls will determine to be farmers first, farmers always. Some of you will, I trust, join our Agricultural Department, but if you do, whilst you must most scrupulously carry out your duty to your employer, the Government, yet still I want you to be farmers first, Government officials second. The success you will win in the Agricultural Department depends upon the influence you can gain with the ryots. It is not for an Agricultural Department to order or to punish, but to persuade and influence. This you will never be able to do unless, from the very beginning of your career, you make it your first object to cultivate friendly relations with the ryot. Unless you can do so, you are useless as far as this Department is concerned. And you can never gain the ryots' confidence unless, by your method of life, you interest farmers. So whether you go back to your own land or whether you enter the Department, I trust you will ever be "farmers first." And as such remember that there is nothing connected with land or crops or cattle which is not of direct interest to you. Our Farm Managers and our Assistant Farm Managers are the eyes and the ears of the Department. They have smaller charges and can spend more time in the villages than can the Deputy Directors or the Principal. And, although you may have been sent out for some particular duty, remember that anything of farming interest is of importance and interest to them and to you.

In other words, be farmers first, not only subordinates carrying out some orders.

There is only one other thing I would wish now to speak of and that is to ask you to stick to the Madras Agricultural Students' Union. Support it as well as you can, help the journal. The Union is doing excellently. But, although it may not seem much to you at present, yet, believe me that, when the time comes for you, as it comes to all, to tread the dustier, hotter stretches of middle age, it is a help and an encouragement to know that, in your old College, among your old fellow students, there is always a warm welcome for you and one which, if you have helped and supported the Students' Union, is doubly deserved. And the bonds of union among you will bind you tighter and tighter, the more clearly you all keep before you the ideal of farmers first.

To those that are now leaving we wish all success. To those who are to return we wish a happy holiday. (*Loud applause*).

Reflections on the Life of a Student at Pusa.

Pusa is a small Agricultural colony in the newly constituted Province of Bihar and Orissa. It stands on the banks of the river, the little Gandak. It is quite close to Janakapur, an ancient sacred place, near Darbhanga. And it is about 6 miles off from Waini, a Ry. Station on the Bengal and North Western Ry. To a man of Southern India, the shortest cut and the most economical one is to reach Calcutta by train; then to get into the Mokameh Express at about 9.30 P. M., so as to reach Mokameh Ghat, on the Ganges at

about 6, the next morning. Here the holy waters of the Ganges should be crossed by a steamer. This takes an hour. And on the other side the train waits to carry passengers to Waini within a period of 3½ hours. Unless due intimation is given, it is not possible to get farm carts other than the North Indian ekkas, the worst type of which is available at Waini. It may be said that it is highly difficult for one ignorant of Hindustani to travel in N. India; much more is it in the Province of Bihar and Orissa where the masses are the least educated.

As a person proceeds from Waini to Pusa, a few miles off from the village, are found clusters of bamboo, the resort of jackals; and, on either side of tidy roads of gravel, there are teak and other trees of luxuriant foliage. Just behind these is seen the Phipp's laboratory, one of the grandest scientific institutions of India. This is due to the generosity of Mr. Henry Phipps who placed at the disposal of Lord Curzon a donation of £ 30,000 for scientific research. A major portion of this was devoted to the Agricultural Research Institute at Pusa and the rest to the Pasteur Institute at Coonoor. The building presents a fine aspect. Its walls are massive; it has a dome in the centre surrounded by small ones. And the whole is characterised by unity, beauty and grandeur. Here are seen various laboratories intended for chemical, bacteriological, mycological, entomological and botanical research connected with agriculture. This building stands magnificent in the farm of 1300 acres. A portion of it is arable; and the rest is pasture and waste land. The soil is of a sandy, alluvial nature, containing a large percentage of lime. The fields command good drainage. The climate has its own peculiarities. A southerner feels the extremes of temperatures, the scorching sun in May and June and a biting cold in November and December. But a Punjabee feels this quite pleasant, since his place is much worse than this. The rainfall is, on the whole, 50" to 60" from both the monsoons, a greater part of it being derived from the south-west. The crops generally raised are cholam, maize, wheat, barley, oats, sugar-cane, castor, dholl, guinea-grass, mulberry etc.

So much for the place. As for study, it depends upon the taste of the individual who goes to Pusa. The instruction imparted in the

Imperial Agricultural College is not of a general sort; but it is of a special kind, as opposed to that in a Provincial Agricultural College. A student is allowed to specialize in one particular branch of study; and the time required varies with the subject chosen, from a month to two years. There are, what are called, the short courses, as apiculture lac-culture, gardening and cattle-breeding which do not last longer than $1\frac{1}{2}$ to 3 months. Sericulture is from 6 months to 1 year; by dint of perseverance, it is possible for one to learn both eri and mulberry methods of cultivating silk. Poultry farming, practised a few years ago, has now been given up. And there is every prospect of a dairy farm being opened in the near future. A knowledge of English is not necessary for these courses, since instruction is also given in Hindi. On the other hand, there are subjects like Agricultural Chemistry, Botany, Mycology, Entomology, Bacteriology and Agriculture which require a sound knowledge of English. Admission is given to University graduates or distinguished Provincial Agricultural graduates. Here it might be mentioned that Pathological Entomology, a branch of the Institute professes to teach "Stygomia", to graduates in medicine.

The management of each branch of study vests mostly in the hands of European Scientific experts, who are aided in their research by trained Indians. And all these are under the control of the Director who is the Principal of the College and also the Agricultural Adviser to the Government of India.

The college hours are generally from 6 A. M. to 12 noon during summer and 10 A. M. to 4 P. M. in winter. It is really pleasant to work during winter, since the climate is embracing, but very trying and troublesome to pull on in summer in spite of electric fans. Botany and Agriculture have their own hours of study, generally from sunrise to sunset, with a recess of about 2 hrs. at midday. And it is possible to work during off-hours with the consent of the Professor in charge of the subject, if a student shows special aptitude for it. The Laboratories are very well equipped with up-to-date scientific apparatus; and a man of a scientific turn of mind finds it happy to concentrate his attention on a subject in these halls of learning. Generally, more attention is bestowed on the practical aspect of a

subject, though the theoretical side is not forgotten. Attached to each laboratory, there is a small library, apart from the general library. It is not easy for a student to find time and get admission into the general library. But when one finds a way into it, he is much delighted to find newspapers, leaflets, bulletins, journals, and magazines etc, circulated from different parts of the world. These provide the student with a fund of useful and valuable information. These also give a comparative idea of the backwardness of our Indian Scientific Agriculture.

As for accomodation, there is the Hostel, intended for 70 students. Apart from its dreary, gloomy look, owing to scantiness of students, it stands towards one corner of the colony. But its loneliness is greatly relieved by the construction of a High School for boys. Students experience much difficulty in the question of mess. Each has to look*to his own arrangements. To live alone and unfriended in the case of a Brahman costs Rs. 20-25 per mensem; but, when joined with others, it costs less i. e, about Rs 15 to 18. Non-Brahmans can get on with Rs. 12 to 15 a month. This includes the cost of milk which is cheap, but excludes that of washerman, barber etc. There is no room rent; and even education is imparted free. In short, a southerner can get on decently with Rs. 300 per annum, including the Ry. expenses to and fro. (May and June are vacation months, while Durga Puja and X'mas contribute a month for enjoyment.)

There are two Clubs. One of them is solely for Europeans; and the other is for the Indian staff and students. The latter gets some help in the supply of newspapers and magazines from the Govt. Games, such as Badminton, Tennis, Hockey, Football and Cricket are maintained partly with the help of Europeans. On the whole, excepting the first three, there is not much activity shown in the rest. But in winter the "maidan", kept green at an enormous cost, looks gay and lively. Polo is confined to the European public. Tennis is played on lawns. Players, few in number, take a keener interest in Hockey than in Football and Cricket. Football is the national game of Bengal; while Hockey is in its full swing in other parts of N. India. One salient feature of the Social Club, especially, is that there is scope for people from

different parts of India to come in contact with one another; and all differences of status are sunk there. Students, who are generally graduates, move on a par with others.

Besides these, there is the Pusa Students' Union, started by a handful of post-graduate students in the year 1912. Its object is to discuss literary, social and scientific matters. The Union receives cordial help both from the Govt. and the public of Pusa. Within the estate, there is a Post and Telegraph Office; and the Hospital is a great boon not only to the Pusa public, but also to the surrounding villagers.

Such in brief is the life of a student at Pusa. But the place would have been more attractive if it had been on the main line between Calcutta and Delhi; and the Institute would have attracted more students, especially for post-graduate study, if there had been a University Degree or a Government title, as M. Sc. or M. Ag.; and prospects of post-graduates are far from encouraging. After all, during a short stay of 2 years, a student's life at Pusa is happy and pleasant. There is wide scope to study different characters, since all nationalities are there. Necessarily, one grows wiser on his final return from Pusa than when he goes there in the beginning. But, as a bit of advice, one must move cautious.

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Some Difficulties in the Way of Extending Sugarcane Cultivation. *

Although it is well known that sugarcane planting is very profitable, the difficulties attending the cultivation of the cane and the harvesting and manufacturing of it into sugar or jaggery, deter many from undertaking it on an extensive scale. A large quantity of water

*Being summary of paper submitted to the Agricultural Conference held on 20th July 1914, by Mr. N. Krishna Aiyangar, B. A., Landlord, Mysore.