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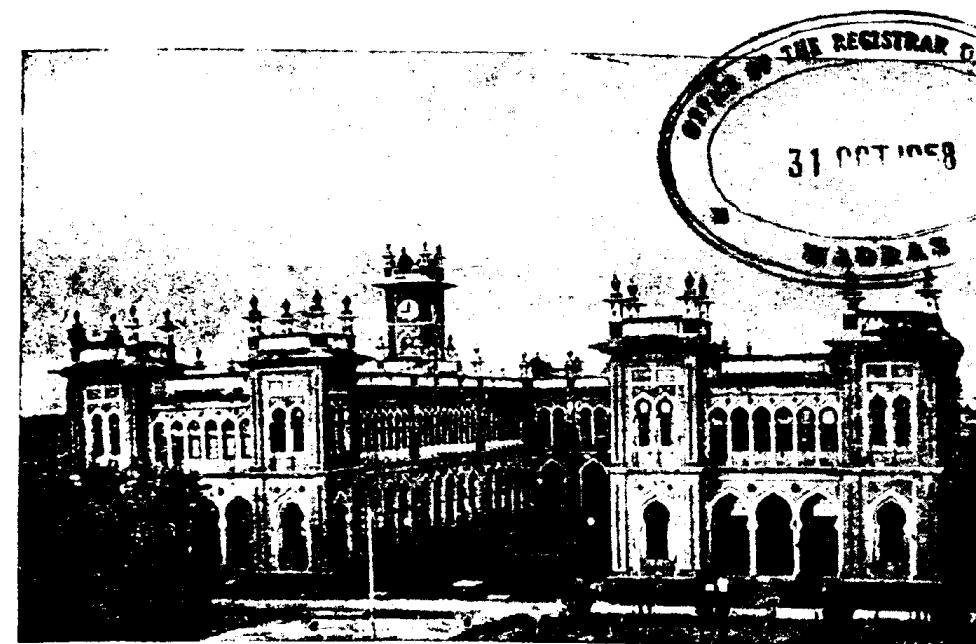
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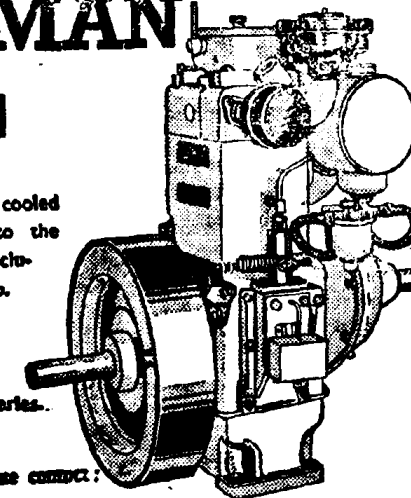
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**INAUGURATION OF THE REGIONAL POST-GRADUATE
AGRICULTURAL RESEARCH INSTITUTE**

by

DR. RAJENDRA PRASAD

President of India

The tenth of August 1958 was a red letter day in the annals of the Agricultural College and Research Institute, Coimbatore. Within an year of the celebration of its Golden Jubilee, the Institute had the honour of being selected as the first centre in India for the institution of a Regional Post-Graduate Agricultural Research Institute. It was but appropriate that this venture, so pregnant with prospects for the future of Agricultural research in India was inaugurated by the President of India, Dr. Rajendra Prasad.

The Institute presented a colourful appearance from the early hours of the morning on the 10th. The officers and staff of the Institute had spared no pains to see that the arrangements for the function were perfect to the last detail. A spacious and most tastefully decorated *pandal* had been put up. An impressive and beautiful arch composed of tropical and sub-tropical fruits had been erected at the entrance to the dais. The main gate was adorned with an arch representing a gopuram, a mosque and a church. The Institute building, the Freeman building, the buildings of the Madras Agricultural Students' Union and the Students' Club were brilliantly illuminated with multi-coloured electric lights and presented a most pleasing appearance.

The President arrived at the Institute at 5-30 p. m. accompanied by the Governor of Madras, Sri Bishnuram Medhi, the Chief Minister, Sri K. Kamaraj, the Minister for Finance, Sri C. Subramaniam and the Minister for Home and Agriculture, Sri M. Bakthavatsalam. Immediately on arrival he spent nearly an hour going round the various research stations of the Institute where the specialists explained to him the research work in progress, which evoked keen appreciation from him.

The President then drove to the specially erected *pandal* and before entering it inspected a guard of honour presented by the students' volunteer corps. He was escorted to the dais by the Governor, Ministers of the State, the Secretary, Food and Agriculture

Department, Sri P. P. I. Vaidyanathan, the Director of Agriculture, Sri A. Venkatesan, and the Dean of the Post-Graduate Institute, Dr. K. C. Naik. At the entrance to the dais he was welcomed in the traditional South Indian manner with nadhaswaram music and flowers and sandal paste.

The pandal meant to accommodate 2,000 invitees, was full.

The function began with prayer by Srimathy Savithri Nagarajan and Kumari Sukanya Bai. Immediately afterwards Sri P. P. I. Vaidyanathan, I. C. S., Bar-at-law, Secretary, Food and Agriculture Department, Government of Madras, read messages received from the Vice-President of India, the Prime Minister of India, the Vice-Chancellor, University of Madras and the Minister for Food and Agriculture, Government of India.

MESSAGES.

SHRI JAWAHARLAL NEHRU, *Prime Minister of India, New Delhi.*

"I am glad to learn that the Government of Madras are starting a Regional Post-Graduate Agricultural Research Institute, which is going to be associated with the Agricultural College and Research Institute at Coimbatore. The importance of this venture is emphasized by the fact that our President is going to inaugurate it. Indeed, among the innumerable activities that our country is taking up to-day, nothing is more important than rapid increase in our agricultural production. While I welcome training and research institutes, I hope that very special attention will be paid to the practical side. There is always a slight danger of research not having close contact with the practical problems that we have to deal with.

I send my good wishes to this new Institute".

* * * *

DR. S. RADHAKRISHNAN, *Vice-President, India, New Delhi.*

"I am glad to know that you will soon have a Regional Post-Graduate Agricultural Research Institute at Coimbatore which will train students for the M. Sc., and Ph. D., degrees. I hope that the students trained there will help to step up our agricultural production and make our country self-sufficient in the matter of foodgrains. It is unfortunate that we are still importing foodgrains from abroad in spite of the fact that nearly 70 to 80 per cent of our population are engaged in agricultural pursuits."

SIR A. L. MUDALIAR, M. D., LL. D. D. Sc., D. C. L. (OXON.), F. R.-C. O. G. F. A. C. S., *Vice-Chancellor, University of Madras.*

"The Vice-Chancellor, University of Madras, thanks the Director of Agriculture, Madras, for his kind invitation to be present on the occasion of the inauguration of this Regional Post-Graduate Agricultural Research Institute by the President of India.

It is an unique occasion indeed, one pregnant with prospects for the future of agricultural research in this country. The Agricultural College at Coimbatore is one of the oldest of the Agricultural Colleges in India, and it is but fitting that on this occasion when so much of interest is evinced in the future of agriculture in our country that it should be raised to the status of a first class Post-Graduate research institute. It is matter for gratification to the University that the Governments of the State and the Centre have evinced such keen interest, and it is the hope of the University that very useful work will be done in this institute both in regard to training of Post-graduates and in matters of research.

On behalf of the University of Madras, I send my hearty greetings and good wishes for the future of the Institute".

* * * *

SHRI AJIT PRASAD JAIN, *Minister for Food and Agriculture Government of India, New Delhi.*

"I am happy to learn of the opening of the Regional Post-graduate Agricultural Research Institute at Coimbatore on the 10th August 1958. The establishment of this Institute marks the implementation of one of the most important recommendations of the Indo-American Team on Agricultural Research and Education set up by the Government of India in 1955. Madras has always been in the vanguard of progress in many respects particularly in the matter of education and research. It is gratifying to note that they are also the first to implement this recommendation and establish a post-graduate college leading to M. Sc. and Ph. D. degrees in Agriculture which would to a great extent relieve the pressure or the necessity for students leaving the country for post-graduate training abroad. It would also strengthen and extend the spirit of co-operation and mutual help among the States in the Southern Region in the sphere of higher agricultural research and education.

Agricultural research and education become effective and would command public support only when they are designed to render the business of farming more profitable. We need to have a great expansion of agricultural research along all lines in order that the national policy of agricultural production may be built upon the solid rock of demonstrated truth which comes only from the most painstaking research, by the most competent research workers. The establishment of the Institute will thus have far reaching effects in training higher research personnel for bringing about abiding improvement in the agriculture of the country.

The institution has a broad duty to perform. It has the duty and responsibility of insuring the permanency of agriculture as an industry and the continued well-being of the rural people of the area.

On this memorable occasion which is of deep significance to the States in the Southern region, I offer my congratulations and wish the Institution every success and prosperity”.

Sri M. Bakthavatsalam, Minister for Home and Agriculture, Madras then delivered his welcome address.

Revered President, Ladies and Gentlemen,

It is indeed a very great honour to Madras State and the city of Coimbatore to have the presence here to-day of the President of the Indian Union. It is an unprecedented honour to this Institution and I deem it as a unique privilege to welcome you, Sir, to this Agricultural Research Institute on the occasion of the inauguration of the Regional Post-Graduate Institute in Agriculture.

On this auspicious occasion, it may not be out of place to make a brief mention of the origin and growth of this Institute, as it would virtually give a bird's eye view of the history of scientific agriculture itself in Madras. In these days, when the concept of a welfare State is so well realized, every citizen accepts the fact that the improvement of Agriculture is one of the primary duties of the State. But a hundred years ago, the position was quite different. The Government did not think it had any part to play in increasing agricultural production and were stirred into taking the first step towards improving Indian agriculture in order to avoid the calamity of recurrent famines in India. In 1868, a small nucleus farm was started at Saidapet near Madras, but at that time agriculture was hardly considered a suitable subject of scientific studies either in

Madras or for that matter anywhere else in India. The Saidapet Farm was more for demonstration and testing of foreign implements, than for research, and the Agricultural Department was itself only a minor limb of the Revenue Department, while agricultural education was relegated to the background and confined to sub-graduate levels. It was only in 1904 during the Viceroyalty of Lord Curzon, that many far-reaching changes were made in the organization of agricultural improvement in India. A number of agricultural departments and training centres were started; two in Bihar (one at Sabour and the other at Pusa), a third at Kanpur in Uttar Pradesh, the fourth at Lyallpur in the Punjab (now in Pakistan) and the fifth at Poona in Bombay. In Madras, the experience of some thirty years revealed that Saidapet was wholly inadequate to serve the growing needs of scientific research and extension, and so the venue was shifted from Saidapet to Coimbatore in 1907. Work on the present Institute at Coimbatore was commenced in 1907 and completed in 1909 when this Research Institute started functioning with a limited staff of just three specialists, an Agricultural Chemist, an Economic Botanist and an Agricultural Expert. With an almost prophetic insight, it was visualised by Sir Arthur Lawley, the Governor of Madras, during the opening of this Institute on 14th July 1909, that this slender staff of three would expand to cover a much wider, though as yet unknown, field of agricultural science in the years to come.

The foundation laid by the early workers was built up so well that in the course of the last fifty years, the Institute has now achieved a name and a fame which is second to none in the whole of India. The world-famous work on sugarcane had its origin in this Institute and was nurtured here until 1924, when it became an All-India Institute under the direct control of the Central Government. We can claim with pardonable pride that this Institute had provided the primary requisites of men and material for the outstanding success that has been achieved in sugarcane improvement. Another contribution which this Institute has made in the cause of All-India science is the Madras Herbarium, which had been built up into the second largest and best-kept Herbarium in the whole country and which was recently transferred to the control of the Botanical Survey of India, under the Central Government. Yet another contribution from Madras towards the improvement of agricultural research on an All-India basis is the recent opening of Multi-crop Regional Research Centre at Coimbatore for investigation

of problems pertaining to cotton, millets and oilseeds, under the auspices of the Indian Council of Agricultural Research and other Commodity Committees for cotton and oilseeds. This is, no doubt, a matter for legitimate pride, that our men and resources are rated so highly as to be requisitioned for such research projects on a National basis, but I would venture to express a hope that this would not lead to any serious depletion of personnel for the requirements of Madras State itself.

In the course of the past fifty years, since 1907, there has been a steady expansion in all the activities of the Agricultural Department. To mention only a few amongst the achievements of the department we have covered over 95 per cent of our sugarcane area with improved high-yielding varieties of cane, over 80 per cent of the irrigated cotton areas with high-yielding and high quality Combodia strains, and over 50 per cent of the cereal grains area with improved strains of paddy and millets. A great deal of valuable knowledge has been secured in the field of crop nutrition, for intelligent and economic utilisation of manures and fertilizers, while, in the sphere of plant protection, the department is now in a position to control most of the crop pests and diseases.

In the field of agricultural education too, the department can claim substantial achievements. The first batch of students to this College at Coimbatore was selected in 1908 and until 1920 there was a three-year course leading to the Diploma in Agriculture. In 1920, the College was affiliated to the University of Madras and the diploma course was replaced by the Degree of B. Sc. in Agriculture. In 1926, the number of students was increased to 48 and a separate building, the Freeman building, was opened to provide adequate teaching space and facilities to all the 48 students. The impact of the Second World war created acute problems, and a large demand for trained and scientific personnel, so that the admissions to the College was increased from 48 to 96 in 1944, and again raised to 108 in 1954, to make up for the loss of personnel consequent on the separation of Andhra State in October 1953. This number was raised once again to 162 in 1956 in order to provide trained hands to man the numerous schemes and projects under the Second Five Year Plan. So far, 1,646 agricultural graduates have passed out of this College, from the inception of the degree course in 1921.

In the field of research, a fine tradition of work has been built up from very small beginnings and we have in the Institute now, sixteen full-fledged research sections and specialists for most of

the crops, as also for allied fields of science, such as Agricultural Chemistry, Plant Pathology and Entomology, Plant Physiology, Cytogenetic and Agricultural Meteorology. The Institute Library is not only one of the best in India but is also having a very efficient system of research abstracts service to meet the needs of the workers of the Institute as well as in the various research stations in the State. The system of culling out fortnightly excerpts from salient points of interest and achievements in the periodical reports of the different research sections is another special feature, which has evoked the appreciation from top-ranking foreign experts in Library Science.

The Coimbatore Institute has been recognized for over 25 years as a suitable centre for post-graduate students to equip themselves for higher degrees like the M. Sc. and Ph. D. Degrees by research. It was therefore natural and quite appropriate that Coimbatore was suggested by the Joint Indo-American Teams as one of the four regional centres in India, for training scientific personnel at the highest possible level to cater to the research requirements of the southern region, comprising Madras, Kerala, Mysore and Andhra Pradesh. The Food and Agriculture Ministry, Government of India, and the I. C. A. R. have accepted this suggestion of the Indo-American Team and we see the fulfilment of this suggestion to-day.

The Government of India have not yet finalized this regional post-graduate set up but the Madras Government have been the first to give effect to this recommendation, even offering to meet the entire cost for the first year from their own funds, and also to meet the cost on buildings over and above the ceiling fixed by the Government of India. This is because of the eagerness of the Madras Government to do its duty in the cause of scientific advancement of Indian agriculture in this region, without expecting any proportionate contribution from other States. We have also readily accepted the stipulation of the Government of India that half the number of students to be admitted each year for post-graduate research should be from other States. The Agricultural Research Institute has thus assumed a national complexion. It was therefore fitting that an Institute which is the first of its kinds to be established in the country should have the blessing of one of its greatest sons, who is now the revered and beloved President of the Indian Union, Dr. Rajendra Prasad.

Thus during the last 50 years, this Institute has made rapid progress. Starting with a modest 20 students a year, it is now in a position to admit 162 students a year for the degree course and 40 for the post-graduate courses. It has become the nucleus of a cluster of allied institutions such as the Sugarcane Breeding Institute, the Southern Herbarium of the Botanical Survey of India and the Regional Research Station of the Indian Council of Agricultural Research for cotton, millets and oilseeds. Its activities extend not merely over the 630 acre campus but cover the whole State. We have 31 Agricultural Research Stations in the Madras State, all of which are centrally directed from Coimbatore.

The usual charge made against seats of higher learning in India and in any other country is, that they have a tendency to convert themselves into ivory towers keeping completely aloof from the hard facts of the every-day life of the citizens. The higher the level of learning goes, the greater this tendency is said to be. I am glad to say that there are no such apprehensions about this Institute that by its conversion into a centre of Post-Graduate training, it might become more exclusive. The tradition of the Agriculture Department and of this Institution in this State has been to keep the research workers in close touch with the farmers making a living on the land and their day-to-day problems. We have actively encouraged the research workers to go and study the problems of the field staff of the Agriculture Department, and we have been able to keep the channel of communication between the two, as wide as possible. I am not saying that improvements are not possible in this field. We have on hand certain measures which will make the integration of agricultural research and extension much closer than it is; but the fact remains this close integration has been the basis of our thinking all these years. Recently, on the analogy of the Land Grant Colleges, there was a proposal to start Rural Agricultural Universities in India and Coimbatore was suggested as one of such centres. But on careful examination, we were of the view that little could be gained by calling this Institution a Rural University, because the aims of the Rural University have in a great measure been realized in this Institution.

May I now request you, Sir, to lay the Foundation Stone of this Post-Graduate Block of this Institute and to inaugurate this Research Institute of Post-Graduate Training in Agriculture?

The President then addressed the gathering as follows: *

"In spite of the greatest strides and great efforts being made to advance the country industrially we still have something between 70 and 80 per cent of our population not only depending upon agriculture but a great part of it actually engaged in agriculture. Agriculture is not only the biggest single item for producing the wealth of this country but is also the biggest single item of finding employment for millions in this country and however great the progress may be which we may achieve within the foreseeable future we cannot hope to see agriculture displaced by anything else either in its wealth-producing capacity or job-finding quality. From both these points of view, therefore, anything that you can do here or anything that can be done anywhere in the country to improve agriculture should be doubly welcome. I am therefore very happy to be associated with this function.

As has been so ably pointed out by Sri Baktavatsalam this institute has a brilliant history extending over some fifty years and within that period it has achieved results which have been of great significance not only to this State or presidency but to the whole of India.

I come from a part of the country where sugarcane is the principal crop and I know how researches carried on here were able to discover new strains of sugarcane which were accepted and adopted by our agriculturists all over the country. It is ordinarily, but I think wrongly believed, that our agriculturists are very conservative and that it is not possible to introduce any changes either in their methods or in their lives. I believe that is a wrong statement. Because, taking sugarcane for example, I can say from personal experience that in our part when the new strain was introduced and actually some farmers made the experiment with the new type of sugarcane it did not take long for others to follow them and adopt the new strain. And within two or three years, I think not more than five years, there was hardly a single sugarcane to be found in the whole State which was of the old variety and which was not of the new variety. Your researches also went on side by side and the result was that it was not one quality which was discovered but qualities which differed from year to year almost, and new varieties came into vogue almost every year and we found that the agriculturists were equally

* The Editorial Board of the Journal is grateful to the Editor, the "Hindu" Madras for kindly making this verbatim report of the President's Speech available.

prepared to change the variety as soon as it was found that it was a good variety and would give them better yield. There, of course sugarcane is sold to factories and there are two things which the agriculturist has to take into consideration in growing a particular variety. The factory-owner tests the sugar content of the cane and the agriculturist wants the weight of the sugarcane because it is purchased by the factory by weight. And so they would be able between themselves to decide which was the best variety best suited to that particular area. As I said they do not take any time in adopting the new varieties as soon as they are convinced that the new variety would be better from their point of view.

I am not sure the same thing can be said of many other crops, at any rate in our parts. Paddy, maize or wheat are some of our important crops. Some research has been carried on, I believe in respect of these. But I am not sure if the results of this research have gone on to the same extent as researches in the case of sugarcane. It is possible that the results are not so very spectacular and therefore they do not catch. It is possible that the results of this research have not been carried to the actual cultivator in the field. It is possible that the method of cultivation required for the new varieties is different and perhaps beyond the resources of the ordinary cultivator. Whatever the reason may be it must be confessed that in the case of other crops the same progress has not been reached in introducing new varieties as in the case of sugarcane and that, I would suggest is one of the things which your research workers could take into consideration. As I have said I am speaking only from personal knowledge of one part of the country and a small part. It is possible that here conditions are different and here you have been able to induce cultivators to introduce new varieties of other crops also. It is possible that here they have been convinced of the value of introducing new varieties and they have actually adopted them. If that is so you should be able to pass on your experience and the result of your experiments to other States also so that they might also profit by them as they did profit by the researches in sugarcane.

As I have said, agriculture is the mainstay of this country and it is going to remain the mainstay. Is it not therefore, a strange phenomenon that in a country which is agricultural, which has land which is fertile, which has got water resources which should be ample and which has also got experience of centuries if not of millenia behind agriculturists that we should still be wanting to

import foodgrains from other countries and we should still become compelled to look to other countries to feed our population? But that is nevertheless a fact which we cannot ignore and even today whenever our Food Minister who is also the Agricultural Minister has to speak he has to speak more about imported food than about anything else and it is really a matter for shame for us that in this country we should be required to look to other countries to feed our population. We should be able at least to feed ourselves if not feed others in other countries. And the way in which these researches are carried on will be a measure of the success which we may attain in this direction. Because, after all we have got to raise the yield per acre. You may have prizes won by people who are able to raise tremendously high yields. They are like racehorses which win races but which cannot draw the carriage. We want every agriculturist whether he has three acres or five acres or even quarter of an acre to be able to grow more than he does today and unless that is done our food problem will not be solved. We cannot forget the fact that in this country are millions of people who are engaged in agriculture. It is not a country of large farms with a limited number of people who are also educated, who have also resources to introduce improved methods of cultivation, improved varieties of seeds and also command plenty of irrigation. We have to deal with millions of people with very small holdings. I do not know what the average holding here is but there are places, certainly in my province where the average per head would not exceed more than one quarter of an acre and where the average holding will not be more than two to three acres per family. We have to deal with a population of that type and a problem of that type. How are you going to reach all these millions of people? How are you going to teach them the best and latest methods of cultivation? Where are they going to find the resources? We have therefore to be on our guard to be able to see what their needs are and how the needs can be met not only of the rich ones but of the poorest and the least resourceful among them and then alone will all our researches be successful, when every cultivator even though he may be a small cultivator is able to produce three maunds where he produced only one and half or one maund today. That is the problem which can be solved by big people becoming small enough to be able to appreciate the difficulty of the small man. And we have to place ourselves in his position so that we may discover means and methods which will be available to him and which he can adopt when in difficulty. That is one of the problems which faces the country. And I believe your research institute which I am quite sure has been

doing such splendid work will always keep itself stuck to the ground. If there is anything to stick to the ground that is agriculture literally as well as metaphorically. And I hope your research students, your scholars, your professors will pay special attention to this aspect and I have no doubt that with all the experience they have gathered with all the work which they have to their credit and with the enthusiasm with which they have been working and which they can command they will be able to solve this problem.

Let me hope that when I come next—and I hope it will not be very long because I must confess I felt very much attracted by what has been done in this institute—you will be able to show me something which will satisfy those needs and which will be helpful in solving the problem of food in the country. I need hardly assure you how gratified I am seeing what I have seen and with the reports which have been given to me of the work which you have done and the work which you are planning.

Our agriculture as you know depends very largely upon our cattle. Here in this country with the average holdings of a few acres I do not know how we are going to introduce mechanisation. We shall have to depend upon the bullock in any foreseeable future. Unless we improve the bullock side by side with the methods of agriculture unless we improve the instruments of agriculture which our bullocks will be capable of using we cannot make much headway in agriculture. Therefore I am glad you are not confining your activities only to the improvement of crops and the herbs but you are also trying to improve the breed of our cattle and there I think I should say one thing. During the last, say sixty or seventy or hundred years during the British period emphasis was on improving the breed of cattle which will give more milk because in other countries particularly in England bullocks are not used for any purpose. The cow is used only for milk and the British people were interested in the milk and therefore all the researches and their attention were confined to improving milk yield of the cow. They were not much interested in the calves. The result was phenomenal. There had been great improvement in the milk yield but what we need is not only milk but also strong bullocks. And therefore we need breeds which can serve both the purposes, which can give us good milk and also good bullocks to do the work of driving the plough and of carrying loads in the bullock cart. You will, I have no doubt, be thinking on these lines and if you can side by side with the improvement of agriculture, improve also the breeding of cattle, which will serve the

dual purpose of yielding more milk and draught cattle you will have served a great purpose, you will have served not only agriculture but also to improve the health of the people. The people by and large in this country, even those who have no objection to non-vegetarian food are also vegetarians because meat is not so very commonly eaten here as in other countries—they have also to use milk as an article of food. Therefore the one important source of nourishment is milk or milk products and for that purpose the cow has to be improved, so that it may give us better and more milk.

If you go on improving in all these directions we shall have all round improvement and agriculture will then become most profitable—it is even now a profitable occupation and the country can become self sufficient in food-grain.

I am happy you have given me this opportunity of inaugurating this institute and I am quite sure in course of time you will be able to show the same kind of results, good and beautiful which you have done in the past and will be in the vanguard of progress in all matters agricultural as you have done so long in this country.

I thank you ”.

At the conclusion of his speech the President unveiled the foundation stone of the Post-Graduate Institute.

The President's speech was followed by the vote of thanks by Dr. K. C. Naik, Dean of the Post-Graduate Institute. Dr. K. C. Naik said :

Revered President, Ladies and Gentlemen,

It is indeed an unprecedented and unique privilege for me to propose a most hearty vote of thanks to our beloved President for gracing this occasion and laying the foundation of this, the first Regional Post-Graduate Research Institute in Agriculture in India. Hallowed by the memory of his participation in to-day's function and inspired by his blessings and advice, this Institute would no doubt be a beacon to spread the light of learning on our basic vocation of agriculture, at the same time maintaining the highest standard, as that of any other institution in the world.

Our Governor has been with us for only a short time, but this did not deter him not only from paying a visit to this Institute, but showing his abiding interest in our work and in the welfare of our

students by donating a shield for the best student in practical farming. We are very happy that he is with us to-day for a second time to participate in the inauguration of our Regional Post-Graduate Institute.

To our Minister for Home and Agriculture, who has been the real architect and driving force behind all that has happened in recent times in the sphere of agricultural development in this State, our gratitude cannot be expressed adequately. It is true to say that during his stewardship of agriculture in the State, both agriculture and agricultural sciences have developed to a far greater extent than ever before in our history. Posterity will record his contributions with far more detail and with much more significance than I can possibly do at this moment.

Our Chief Minister and our Minister for Finance and Education have been more than a tower of strength to us during this stage of transition and development. It has been our proud privilege to have such an able team of Ministers under whose leadership, agriculture in this State has advanced considerably and is destined to advance even more so as to be a model to the rest of India.

It has also been our good fortune in our State, at this time of phenomenal development of agriculture to have at the helm of our affairs, a Secretary and a Director of Agriculture, of whom any State in India may well be proud. Their guidance and solicitude are matched only by their enthusiasm in handling their task. I, in common with all my associates, deem it a very great privilege to be associated with the Institution at a time when we have such a galaxy of administrative talent to inspire us with their examples and guidance. Barring our three Ministers, if there is one name which is popularly associated and which will for long be associated with this Institute, it is that of our Secretary, Food and Agriculture, who had worked with single-minded devotion to make, what was until last year, only a dream, into a reality.

No function of this importance and magnitude can be organised without the active co-operation of a large number of colleagues, friends and well-wishers. The Principals of the neighbouring Colleges like the Government College of Technology and the Forest College and my colleagues in this Institute have not spared themselves in giving their best to make this function a success. The Public Works Department and more particularly the Superintending Engineer,



Students lined up for the guard of honour

Photo : Thangamuthu



President inspecting the guard of honour

Photo : P. R. Damodaran



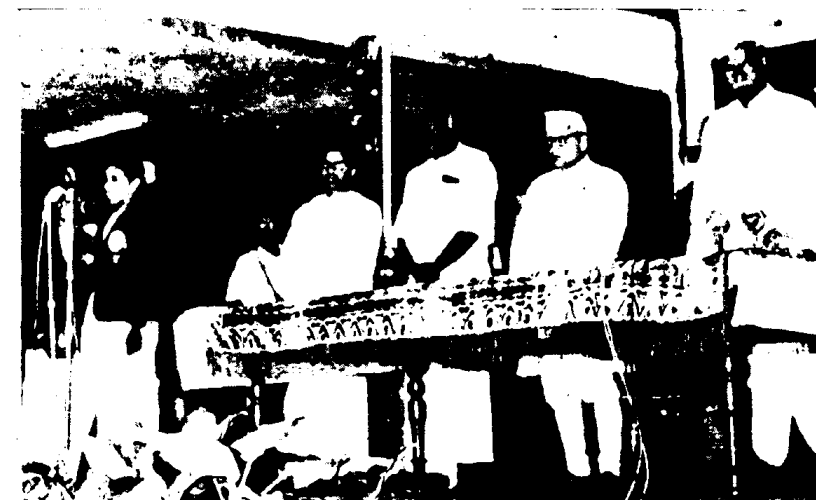
President being received

Photo : Manickavasagam



President admiring the fruit arch

Photo : P. R. Damodaran

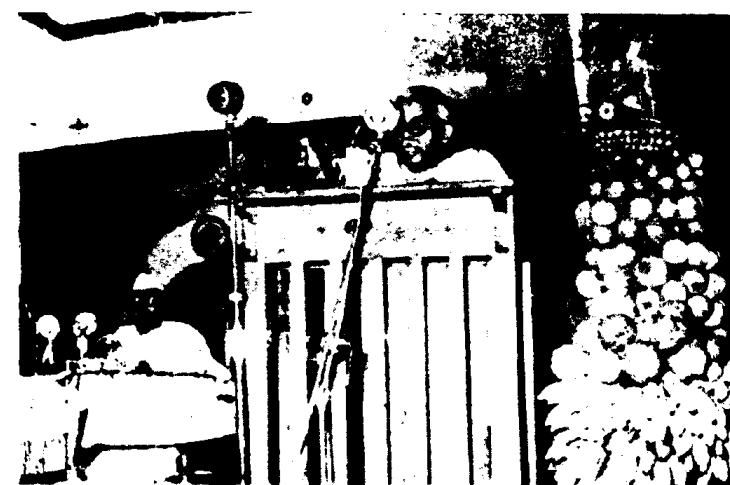


Prayer

Photo : P. R. Damodaran



Sri P. P. I. Vaidyanathan reading messages

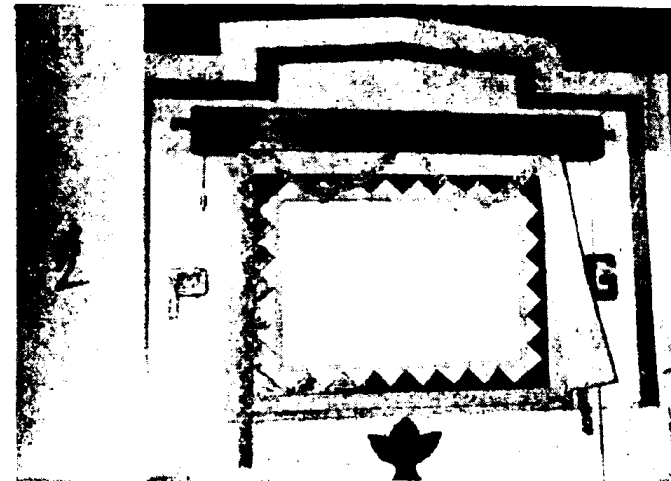


Sri M. Bakthavatsalam's Welcome Speech

Photos : Thangamuthu

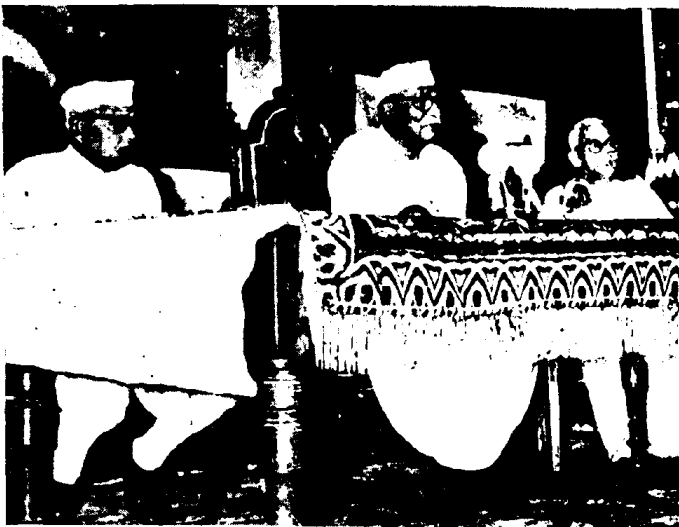


Photo : Manickavasagam



The foundation stone

Photo : P. R. Damodaran

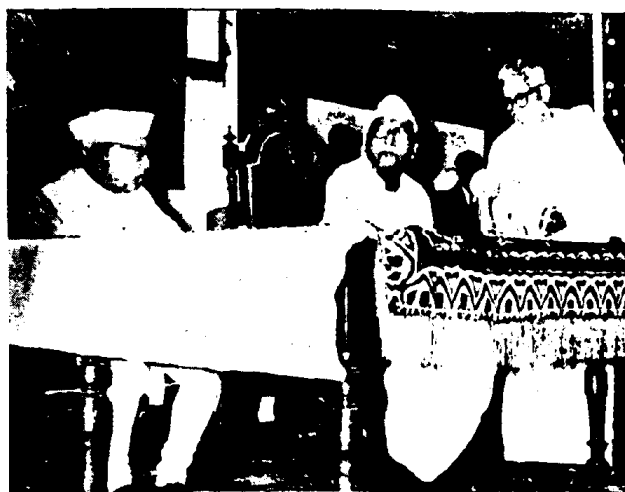


President addressing the gathering



Two views of the audience

Photo : Manickavasagam



President laying the foundation stone

Photos : P. R. Damodaran



Photo : P. R. Damodaran



Vote of thanks by the Dean Dr. K. C. Naik

Photo : Thangamuthu



President
at the
Exhibition



President driving through the college estate



Photos : Manickavasagam



President signing the visitor's book

Photos : P. R. Damodaran



Photo : P. R. Damodaran



President distributing sweets to children

Sri Pandian, the Revenue and the Police Department, particularly the Collector and District Superintendent of Police are some of the large number of persons without whose help we could not have achieved that measure of success which may be patent to all of you. The students of this Institute have always maintained their high tradition in serving with a spirit of selflessness, and I am proud to have such an enthusiastic band of youngmen to be a support on an occasion like this. May I also thank you, ladies and gentlemen, who have gathered here in such large numbers and taken a lively part in identifying yourselves with the welfare of this Institute? I have now only to request you to join with me in wishing very long life to our beloved President.

JAI HIND.

The function came to a close with the singing of the national anthem.

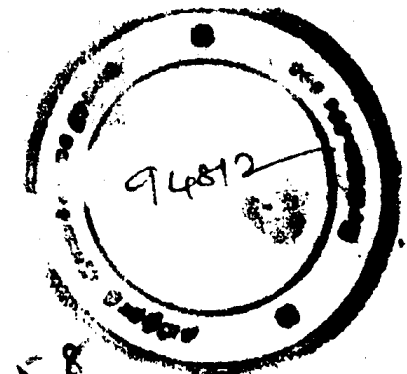
Immediately after the inauguration ceremony the President went round a small exhibition of the activities of the Agricultural Research Institute, which had been arranged in the lobby of the Institute. He evinced keen interest in the exhibits. From the exhibition he drove to the rest house and on the way distributed sweets to children who had assembled in large numbers. He later, very kindly posed for group photographs with the staff of the Post Graduate Institute and the members of the reception committee.

In the following pages we print some of the photographs taken during the President's visit.



The Institute from a new angle

Photos: Manickavasagam



A Technique in Student Evaluation

by

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Coimbatore.

Evaluation of students is part of an educational program and it is inseparable from the other duties of an instructor in the teaching of any course. Correct assessment of student's merit needs great skill on the part of the teacher, if he wishes to be successful in his profession. There exists, at present, a system of evaluation which, though well established over a period of time, by no means can be considered perfect. Some of its main defects are:

1. The student's merit is decided upon by a single final examination.
2. His performance throughout the period of study in the class room is not rewarded.
3. Consequently there is no urge in the student to be consistent in his studies and receive the full benefit of the course.
4. Since the greatest emphasis is on the finals the student gets anxious and excited so much at this hour that it is unwarranted and unworthy of.

The present work was initiated with the object of evolving a technique which will make the students work uniformly throughout the year, measure the student's merit more accurately and more efficiently with minimum efforts.

Very little published material on student evaluation techniques are at present available in literature.

Materials and Methods: The performances of 162 students of the Agricultural College, Coimbatore, who were enrolled in the Animal Hygiene course during the period from July, 1956 to January, 1958 and the results of the University examination in the same subject were made use of in this study.

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Owing to paucity of text-books mimeographed lecture notes were distributed to students at the beginning of the term, previous reading assignments were made and the lecture hours utilized for discussions, demonstrations and partly for lectures. Students were encouraged to talk and bring in their problems. Evaluation of students was made throughout the year by periodical tests, quizzes and home work assignments. Their regularity to classes and tests, punctuality in carrying out the assignments were other factors watched for and recorded.

Quizzes were tests conducted at intervals of about a month, each having a duration of half an hour. Each quiz had three main divisions, the first had fifteen statements to be distinguished true or false, the second five sentences for filling up the blanks and the third five brief answer questions. The first and second main questions were so designed as to test the student's ability to distinguish the right from the wrong and capacity to remember new scientific terminologies, dates and numbers. The brief answer questions were intended to measure the student's information power, exposition, arguing ability and skill to solve problems. The tests were so exhaustive as to cover the whole subject in detail and simultaneously easy to score without any bias.

The quiz papers were mimeographed sheets and the students answered on the same, which were then scored for hundred and graded as follows:

Score (points)	Grade
85 to 100	Excellent
70 to 84.9	Superior
55 to 69.9	Medium
40 to 54.9	Inferior
Below 40	Fail

They were then distributed to students while in small groups and thoroughly discussed to make it a sort of revision of lessons. This gave an opportunity to students to make themselves sure of the correctness of the estimates made by the teacher.

Home work assignments were on problems wherein the students had to refer, collect, and present materials. They were graded in the same manner and recorded.

Record sheets were maintained for each student as regards their performances in quiz, home work, attendance and punctuality, and these were available to them when desired. Time required to set up quiz papers, evaluation and posting grades were accurately recorded.

To test the reliability and efficiency of the quiz system the performances of the students in the quizzes were compared with those of the existing terminal examinations which were of the duration of three hours each and scored by another lecturer of the same department teaching the same subject partly. The performances were also compared with the results of the University examination to decide the merits of the new system.

At the finish of the course the students were asked to express their opinion about the new technique of evaluation and compare the quizzes with the terminal essay type examinations in a confidential questionnaire which were later analysed.

Correlation analysis, averages, standard deviations and tests of differences were done by methods described by Mills (1938) and Snedecor (1946).

Results: 416 quiz papers took a total of 15 hours and 30 minutes for evaluation with an average of 2.23 minutes for each. It took only three hours to evaluate a class of 81 students and the score and grades in most of the cases were posted the next day of the tests by the lecturer. A terminal examination of the essay type for the same class took about 13.5 hours for evaluation on an average of 10 minutes for each paper.

Reliability tests indicated that the quiz system is as efficient as the terminal essay type examination, if not better, in measuring the student's merit. The correlation coefficient between the scores of students in the two types of tests was positive and highly significant ($r = +.6$; $p < .01$; Fig. 1).

Table I illustrates that the students' scores in quizzes were always higher than the scores in the terminal examinations. The average of the four quizzes for all the students ranged from 38.5 to 78.5 with a mean and standard deviation of 59.9 ± 9.7 and the same for the terminal examinations ranged from 28.8 to 66.2 with a mean and standard deviation of 45.1 ± 8.6 .

A Technique in Student Evaluation

TABLE I

The mean of 74 students' score in the four quizzes and essay type examinations in Animal Hygiene.

Serial number of the test	Mean score (class average) in quiz per cent	Mean score (class average) in terminal essay type examination per cent
1	58.8	46.1
2	61.3	46.2
3	62.8	44.8
4	55.0	43.4
Weighted mean for the four tests	59.9 ± 9.7	45.1 ± 8.55

Nevertheless both the systems ranked the students in the same order. The quiz was consistent in giving higher scores. The excellent student in the terminal examination was excellent in the quiz and the inferior same in both (Figure 1).

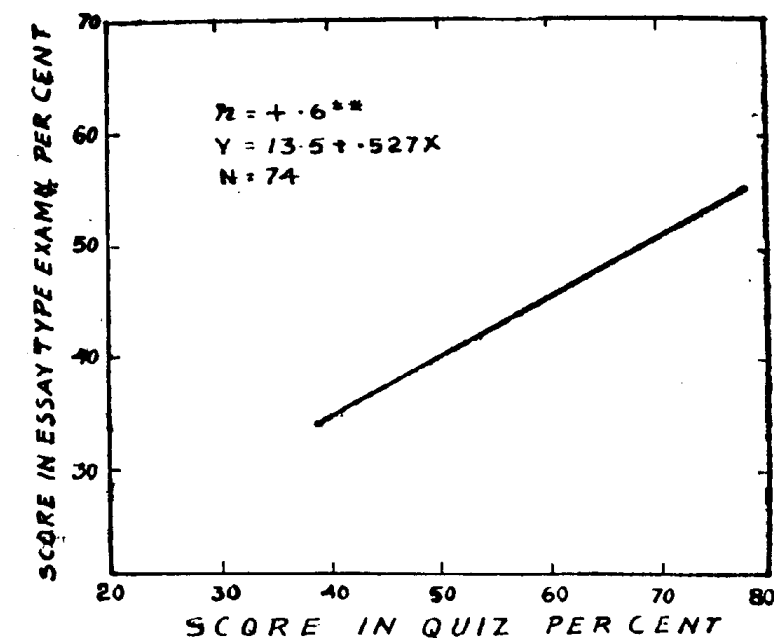


FIG. 7. REGRESSION OF THE PERFORMANCES OF STUDENTS IN ESSAY TYPE EXAM ON THEIR PERFORMANCES IN QUIZ.

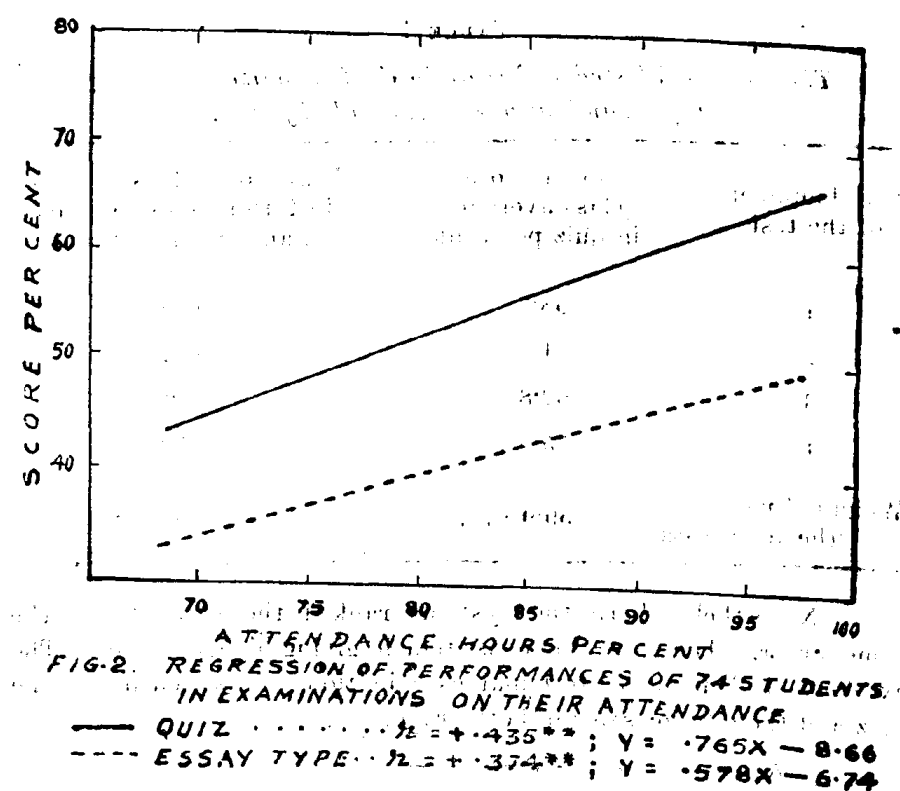


Figure 2 illustrates the closer association between the quiz score and class attendance. The correlation coefficient between the former two was $+ .435$ and the later two $+ .374$. This suggests that the quiz tells more about the students' regularity to class than the terminal examination. The difference between the two correlation coefficients were, however, not significant.

Some of the opinions expressed by the students in the confidential questionnaire about the technique of evaluation employed herein are as follows:

1. "The students are made to study throughout the year by periodical tests, otherwise they will have a tendency to postpone their studies to a later date towards the finals".
2. "Students got bold to talk in the class and bring in their problems".
3. "The system of recording is thorough and unbiased and this helps maintenance of discipline, besides the students are satisfied with the judgements made on the basis of records unlike in some wherein hostility creeps in".

4. "The students have to be thorough with the subject to answer the quizzes and they cannot afford to be selective in studies".
5. "The system of grading as Excellent, Superior, Medium etc. is a stimulus for putting in greater efforts for higher grades".
6. "This system fosters better student staff relations since the teacher has to be unbiased necessarily in his estimates".

The clear verdict of superiority of the quiz system over the existing terminal essay type examination has been well demonstrated by the students giving very high score to the former in respect of the several characteristic (Table II)

TABLE II

Results of analysis of the scores given by 77 students for the quiz and essay type examination in respect of the different traits in each.

Trait	Points in favour of	
	Quiz per cent	Essay type examination per cent
1 Accurate measurement of student's merit	62.2	37.8
2 Creation of a competitive spirit by grading	74.7	25.3
3 Elimination of bias in scoring	67.2	32.8
4 Relief of stress of examination	52.9	41.1

Table III compares the merits of students judged by class performance with their performances in the University examination. It will appear that out of the 28 students who failed in the University examination 26 (92.8 per cent) were from the medium and inferior classes and only 2 (7.2 per cent) were from the superior class. This adds further evidence to the fact that the new technique ranks the students in the same order as the other tests and that it is sound enough to be implemented if and when found to be more advantageous.

TABLE III

Final grade of students at the finish of the course	Number of students in each grade	No. of failures in the University Examination in each group	Per cent of the total number of failures	
Excellent	2	Nil	Nil	
Superior	17	2	7.2	7.2
Medium	70	13	46.4	
Inferior	35	11	39.3	92.8
Fail	8	2	7.1	
Total	132	28	100.0	100.0

Discussion: The primary object of education is to impart knowledge in arts, science and technology to students so that it may spread and be utilized in day to day life for the benefit of mankind. Evaluation of students as part of the educational programme has two important functions: (1) to make the students acquire more knowledge, and (2) to grade the students according to merit.

Evaluation made throughout the year effectively does the first function since students have to be consistent in their endeavours to get higher grades. Accumulated grades over a period of time will, no doubt, give a more accurate estimate of the student's merit than one decided upon by a single final test.

In the technique of evaluation employed herein several factors that go to measure the student's merit are taken into consideration, the performances in quizzes, home work, attendance, regularity in carrying out the assignments, etc. All these were correctly recorded in personal sheets, so that a glance through the records will indicate if a student is intelligent or dull, regular or irregular, making progress or at a stand still or declining. Since these records were accessible to students they were guides to them as well.

The system of grading as *Excellent*, *Superior*, etc. threw in a new competitive spirit and urged the student population to be on constant endeavour to acquire more knowledge and thereby higher grades.

There are still no substitutes for tests in deciding the students' merits. The author has preferred the quiz system to the existing terminal examinations in view of the several advantages it possesses

over the other. It can be conducted at more frequent intervals without taking much of the teacher's valuable time. In other words it is a good time saver. A class with a strength of 81 students could be evaluated and their grades posted in 3 hours, whereas the existing system would take 13.5 hours for the same job. The saving is, therefore, 10 hours for each test which is quite substantial.

It is also remarkable how an half hour quiz could measure the student's merit as accurately as, if not better than, the three hour essay type examination (Figure 1).

It is easy to correct the quiz papers. With the key even an assistant can evaluate them as efficiently as the lecturer and thus the latter can be relieved of this work when he is occupied otherwise.

The quiz tests are exhaustive and the students have to prepare their lessons thoroughly, and be not selective, to get better grades.

The key for quizzes are thrown open and students given an opportunity to make themselves sure of the unbiased estimates.

The true and unbiased nature of the records foster healthy and closer student-staff relations and encourage students to bring in their problems boldly to the teacher.

The comparison of the quiz scores with the scores of the terminal essay type examinations was made only to test the relative efficiency of the quiz over the other and it has proved itself to be as sound and efficient as its counterpart if not better. This is further supported by the fact that this technique has ranked the students, more or less, in the same order as the University examination. 92.8 per cent of the failed students in the University examination were from the medium and inferior groups and only 7.2 per cent from the superior groups (Table III).

It is, however, disappointing that two superior class students, who were consistently good throughout the course, should have failed in the University examination and thus fallen victims to chances. Conversely, if 6 out of 8 failed group students have got through the University finals it can be attributed only to chances. It is not possible to avert such difficult situations and distribute justice equitably to one and all unless and until steps are taken to include the class performances in the final judgement of the student's merit.

Records as in the present technique, when incorporated with the University examination in assessing the student's overall merit, will no doubt minimise the student's anxiety and excitement at the last hour of the finals to a great deal.

Students who are directly concerned with and who have experienced the two systems are sometimes better judges in many ways and they have given their clear verdict of superiority of the quiz over the existing system (Table II).

In view of the above findings it is suggested that the new technique of evaluation, which measures the student's merit more accurately and efficiently, be given a wide trial in the interest of the teacher and the taught and attempts made to incorporate the student's performance in the class based on such records with the University examination.

Summary: A new technique for student evaluation has been developed and tested over a period of two years in the Animal Hygiene course in the College of Agriculture, Coimbatore.

Its merits and advantages over the existing system are analysed and discussed.

It is recommended that a wide trial is given to this new system and steps taken to incorporate the class performances with the University examination in deciding the student's final merit.

Acknowledgments: The author is greatly indebted to Dr. K. C. Naik, Principal and Joint Director of Agriculture, Agricultural College and Research Institute, Coimbatore for the excellent facilities and encouragement offered during the period of study. This paper was presented in the weekly study group meeting of the college and the valuable suggestions offered by the teaching and research staff have greatly helped in the final shaping of the paper. The author's thanks are due to one and all of them.

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Madras agric. J., 45 : (8) 311-314, 1958

A Monosome in Rice

by

D. V. SESHU and T. VENKATASWAMY
(Central Rice Research Institute, Cuttack-4).

Introduction: Cytogenetics of rice and rice hybrids has not been fully studied inspite of its economic importance. One field of study is hybrid sterility. It is well established that hybrids between *indica* and *japonica* sub-species of rice show varying degrees of sterility and also that by normal selection fertile types can be secured in the progeny. The occurrence of semi-sterility in hybrids between plants of the same species namely *O. sativa* L. is of theoretical interest and hence a detailed study of the nature of this sterility has been undertaken at the Central Rice Research Institute. During such a study it was found that the hybrids between *indica* and *japonica* varieties are a good source of chromosome variability and an instance of such a variant secured from hybrid progenies is given below. The mode of origin of such variants is inferred to be caused by the cryptic chromosomal structural differences present in the sub-species affecting the meiotic mechanism thus resulting in chromosome variability in later generations. A study of such chromosome variations would be of use in interpreting differences between the *indica* and *japonica* sub-species and also in tracing the evolution of cultivated rice. The variants may also have use in rice breeding, for it is well known that aneuploids have been successfully used in other crop plants like wheat (Sears 1953 and Sikka *et al.*, 1956) and tobacco (Cluusen and Cameron 1944).

Material and Methods: For the study of the genetics of semi-sterility a series of hybrids between *indica* and *japonica* rices were grown and from these cultures highly sterile plants were selected. One such plant from the F₅ generation of the cross T. 1145. (Orissa) and Taihoku (Japan) was found to have reduced spikelets, non-dehiscent anthers and sterile pollen. This plant was maintained by vegetative propagation. Initially there was no grain setting in the second crop season, but however, after continued vegetative propagation a quantity of seeds could be collected in the main season (July to October) when the sterility was only 72%. On sowing these seeds about 28% germinated and a population of 45 plants was grown in the following second crop season. This progeny and its above mentioned parent were studied cytologically.

For meiotic studies, spikelets in suitable stage were collected and fixed in propionic alcohol (3:1) between 10 a. m. and 12 noon. Spikelet tips were cut off before fixing to allow the fixative to penetrate well into the material. Propiono-Carmine was used for staining. For studying mitosis root tips were fixed in Bouin's fixative after pretreatment with alpha-bromo-naphthalene and passed through chloroform series. Sections were cut at a thickness of 10 microns and stained in Heidenhain's haematoxylin. Camera lucida drawings were made at bench level using oil immersion objective (100 X).

Experimental Results: Cytological studies of the root tips showed that the parent plant (Culture No. 159-32-4-15) was a monosome having 23 chromosomes (Fig. 1), one less than the normal complement of 24. This number was confirmed also subsequently after vegetative propagation. It is inferred that this plant originated by the union of a 11 chromosomed gamete with a normal one having 12 chromosomes. The chromosome deficiency could have arisen by the non-disjunction of one bivalent, an inference supported by the observation of Sampath and Mohanty (1954), who found the occurrence of anaphase bridges and laggards in the M. I. stage of P. M. C. in *indica* x *japonica* hybrids.

Normally a monosome is expected to segregate for normal and sterile plants, just as there would be segregation for chromosome number. This expectation was not confirmed in the progeny. On the contrary the progeny showed uniformity for medium height, high sterility, slightly reduced spikelet size (comparatively larger than the spikelets of monosome) narrow leaf (slightly broader than the leaves of monosome) and flowering duration. The cytological studies also revealed a uniformity in chromosome number in the samples studied, all of them possessing 12 bivalents (Fig. 2) as observed in the diakinetid as well as metaphase stage of meiotic division of P. M. C. This number was confirmed by studying the root tips where 24 chromosomes were counted in the somatic metaphase. The probable explanation for the prevalence of only normal diploids in the progeny is that union occurs only between gametes possessing the full complement of 12 chromosomes, the chromosome deficient gametes being eliminated on selfing. Such a 24 chromosomed plant should ordinarily be fully fertile. Since the monosome was obtained from the *indica* x *japonica* cross, the genic balance in the progeny will control fertility and the high sterility is attributable to genic factors.



FIG. 1

R. T.; Monosome-Somatic metaphase
($2n = 23$); X 2200

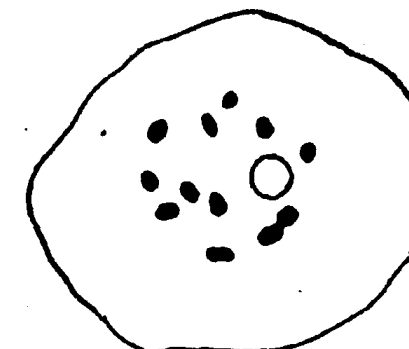


FIG. 2

P. M. C.; Progeny of Monosome
(10 II + 1 IV), X 2200

The cytology of sterile diploid progeny derived from the monosome showed the following interesting feature. Six plants, in all, were used for study of meiosis in the P. M. C. Frequently in these cells from all the six samples, one quadrivalent was observed in proximity to the nucleolus. The cytogenetics of this progeny is being studied further. Since they are completely sterile in the second crop season, crossing with normal pollen in the main season is to be done.

Discussion: Both the monosome and its progeny are of interest because they can be used to locate the genes carried by the missing chromosome, thus to identify a linkage group with a particular chromosome and also to trace the differentiation of *indica* and *japonica* sub-species. Previous work by Venkataswamy (1957) had shown that highly sterile true-breeding cultures can be obtained from progeny of *indica* x *japonica* crosses and also that occasional quadrivalents are present in such cultures. Since the monosome also produces such a progeny, explanation for this behaviour can be elucidated from a study of hybrid sterility in *indica* x *japonica* crosses.

One other instance of monosomy in rice has been previously reported by Sampath and Krishnaswamy (1948) and the same was studied further by Chandrasekharan (1952). Their material was strikingly different from the present instance for that monosome was completely fertile, extremely alike to the normal 24 chromosomed plant. The cause of high sterility of the present example could be due to its hybrid origin as mentioned before, as well as to identity of the missing chromosome.

In addition to the monosome, haploids, tetraploids, chromosome structural variants, as well as mutants, having narrow leaves, increased lemma size etc. have been isolated from the progeny of

indica × *japonica* hybrids. All these variants support the inference that chromosome structural differences exist between the species as originally postulated by Terao and Mizushima (1939) and Kuang (1951). The present work stresses the importance of looking for the very small number of mutants and chromosome variants which are likely to be present in the hybrid populations.

Summary: A highly sterile plant selected from the F_2 generation of a cross between the rice varieties T 1145 (Orissa) and Taihoku (Japan) proved to be a monosome having the somatic chromosome number 23. From seeds of this plant a progeny of 45 plants was raised which were uniform in appearance and completely sterile. A sample study showed the progeny to be normal diploids. It is inferred that the monosome arose by non-disjunction of a bivalent in the F_1 generation. The semi-sterility of the monosome and the diploid progeny is attributed to genic unbalance arising from inter-racial hybridization. The *indica* × *japonica* hybrid progenies were observed to be a source of chromosome variants.

The authors express their deep gratitude to Sri S. Sampath, Cytologist, for his valuable suggestions and encouragement.

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Madras agric. J., 45 : (8) 315-316, 1958

Research Note

A Case of Syncotyly in *Arachis hypogea* Linn.

In the abnormal groundnut seedling described herein, only one cotyledon borne on a single stalk was present. This was observed in a bunch variety of groundnut (TMV. 2) raised for seed multiplication at the Agricultural Research Station, Tindivanam. The cotyledonary stalks were found to be fused by their entire margin resulting in the union of the two cotyledons by one side to form apparently a syncotylous structure taking a lateral position to the terminal bud (Plate, Figure 1); also only one cotyledonary lateral was noticed. However in the normal seedling (Plate 2) two cotyledonary laterals arise from the nodes. The cotyledonary stalk of the abnormal seedling revealed the presence of four collateral vascular bundles (Figure 3) instead of the two in each stalk of the cotyledon of the normal seedling. It is therefore concluded that the single cotyledon exhibited by the abnormal seedling appears to be a case of syncotyly.

PLATE



FIG. 1.
(Syncotylous)

FIG. 2.
(Normal)

Syncotyly has been described by De Vries (1911) to denote the fusion of two cotyledons in the dicotyledonous genera of plants to form a single structure and recorded instances in *Helianthus annuus* Linn, *Polygonum convolvulus* Linn, etc. Ramakrishnan (1953) and Ghosh (1955) also have reported cases of syncotyly in *Terminalia catappa* Linn, *Casuarina equisetifolia* Linn, and *Sesamum indicum* Linn, respectively.



FIG. 3.
Syncotylous seedling showing the cotyledonary stalk magnified

The authors wish to record their thanks to the Superintendent, Agricultural Research Station, Tindivanam for his help.

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Weather Review — For July, 1958.

RAINFALL DATA (IN INCHES)

Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January 1958
North	Madras (Meenambakkam)	1.9	— 1.7	6.6
	Tirurkuppam*	1.3	— 3.3	6.2
	Vellore	0.8	— 3.8	9.9
	Gudiyatham*	0.9	— 0.7	9.8
East Coast	Palur*	1.3	— 2.6	6.0
	Tindivanam*	1.4	— 2.3	7.3
	Cuddalore	1.1	— 1.5	6.2
	Nagapattinam	1.7	Nil	4.1
	Aduthurai*	0.2	— 2.0	6.2
	Pattukkottai*	2.3	+ 1.1	10.7
Central	Salem	3.4	— 0.4	11.4
	Coimbatore (A. M. O.)*	3.1	+ 0.9	9.8
	Coimbatore	2.1	+ 0.4	10.0
	Tiruchirapalli	0.1	— 1.0	6.1
South	Mathurai	Nil	— 2.0	7.9
	Pamban	0.1	— 0.4	9.4
	Koillpatti*	0.2	— 0.3	7.6
	Kalayamcottai	0.3	Nil	9.8
	Ambasamudram*	1.3	+ 0.6	18.1
	Nagercoil*	6.2	+ 2.8	21.1
Hills	Kodaikanal	2.3	— 2.4	27.1
	Coonoor*	1.4	— 1.7	33.1
	Ootacamund*	8.4	+ 2.3	26.9
	Nanjanad*	19.1	+ 7.7	37.0

Note:— * Meteorological Stations of the Madras Agricultural Department.

Scattered to localised rains were received during the month of July, 1958 except for eight days, when dry weather prevailed in Madras State.

Monsoon had been active over coastal Mysore on 1—7—'58, when scattered showers were received in Tamil Nad. For four days from 2—7—'58, Madras State received localised rain. On 6—7—'58, light showers occurred at a few places in coastal Madras State, while weather was mainly dry elsewhere in the region. The monsoon had been generally weak over the country. Mainly dry weather was prevalent in Madras State on 7—7—'58. For two days from 8—7—'58, rains or thundershowers were scattered in Tamil Nad. Localised rains occurred in interior Madras on 10—7—'58, when weather was dry elsewhere in the region. For two days from 11—7—'58, rains were localised in the State. Monsoon had been vigorous in Saurashtra, north Konkan and Maharashtra on 13—7—'58, when dry weather was prevalent in Madras State. For six days from 14—7—'58, rains or thundershowers occurred at a few places in Tamil Nad. On 20—7—'58, rains were received at a few places in north Madras, while weather was dry elsewhere in the region. Mainly dry weather prevailed throughout the State for two days from 21—7—'58. Rains or showers occurred at a few places in coastal Madras on 23—7—'58, when weather was dry elsewhere in the region. On 24—7—'58, Madras

State received scattered rains. Except for the dry weather on 25—7—'58, rains or showers were scattered in Madras State for three days from 26—7—'58. During the last three days of the month, mainly dry weather was prevalent in Tamil Nad.

Regarding the fluctuations of day temperatures, they were generally below normal during the period under report.

Rainfall: The noteworthy rainfalls and the zonal rainfalls for the month are furnished below:

Noteworthy Rainfalls

S. No.	Date	Name of place	Rainfall in inches
1.	2—7—1958	Nagapattinam	1.30
2.	2—7—1958	Nanjanad	3.36
3.	3—7—1958	Salem	1.21
4.	11—7—1958	Ootacamund	1.08
5.	28—7—1958	Kallakurichi	1.07

Zonal Rainfall (in inches)

Name of Zone	Rainfall for July, 1958	Departure from normal	Remarks.
North	1.2	— 2.4	Far below normal
East Coast	1.3	— 1.2	Below normal
Central	2.2	Nil	Normal
South	1.4	+ 0.1	Just above normal
Hills	7.8	+ 1.5	Above normal

Agricultural Meteorology Section,
Lawley Road Post, Coimbatore-3.
12th July, 1958.

C. B. M., M. S. D., & A. K. V.

Departmental Notifications

Gazetted Officers — Madras Agricultural Department Postings and Transfers during the month of August 1958.

Name and Designation	Transferred or posted to
Sri Ayyadurai, Tempy. Oil Seeds Specialist, Coimbatore	Leave for 61 days.
„ S. Muthuswamy, Asst. Hort., Coimbatore	Asst. Hort. Coimbatore, Vice R. Bettai Gowder and to be in additional charge of Horticulturist and Lecturer in Horticulture, Coimbatore.
„ J. Kuppuswamy, Nursery Asst. Ooty	Temporary, Lecturer in Horticulture, Coimbatore.
„ R. Bettai Gowder Asst. Horticulturist, Coimbatore	Banana Res. Officer, Aduthurai.
„ Soundararajan, Field Manure Officer, Coimbatore	Lecturer in Chemistry, Agricultural College, Coimbatore.
Dr. K. C. Naik, Principal Agri. College & Res. Inst., Coimbatore	Re-employed as Dean in the Regional Post-Graduate Institute, Coimbatore for one year from 1—8—1958 and Addl. Director of Agriculture (Res.) (Ex-officio) from 1—8—1958.
Sri M. Bhavanisankara Rao, Oil Seeds Specialist, Coimbatore	Vice Principal, Agri. College and Research Inst., Coimbatore and to be additional charge of the Principal Vice Dr. K. C. Naik.
„ S. Sundaram, Vice Principal, Agricultural College & Research Institute, Coimbatore	Oil Seeds Specialist, Coimbatore.
„ U. Narasingha Rao, Horticulturist and Prof. of Horticulture, Coimbatore	Transferred and placed at the disposal of the Govt. Mysore.
„ S. Ramaswamy, Cane dev. Officer, Madras	Leave for 19 days.
„ C. Ekambaram, Gazetted Asst. Madras	To be in additional charge of above post.
„ C. V. Govindaswami, on return from United Kingdom	To be Lecturer in Mycology, Coimbatore.
„ Radhakrishna Alwa, Asst. A. R. S., Nanjanad	Superintendent, A. R. S., Nanjanad.
„ K. R. Sundaresan, Asst. Lect. in Agronomy, Coimbatore	Asst. Agronomist, Kulitalai.
„ A. Azumuddin, D. A. O.	Field Manure Officer, Coimbatore.
„ R. M. Chidambaram, Dy. Director (Drilling)	Earned leave for 15 days.

Name and Designation	Transferred or posted to
Sri A. M. Muhamad Ali, A. A. E., Soil Cons. Scheme	A. A. E., (Res.) Coimbatore.
„ V. N. Madhava Rao, Banana Res. Officer, Auduthurai	Granted 28 days leave on the expiry of the leave for Delhi on deputation to U. S. A.
Dr. A. Mariakulandai, (Washington) Govt. Agri. Chemist, Coimbatore	To be Prof. in Soil Science in the Regional Post-Graduate Institute, Coimbatore.
„ K. Ramakrishnan, Govt. Mycologist, Coimbatore	To be Professor in Plant Pathology in the Regional Post-Graduate Institute, Coimbatore
„ V. Santanam, Asst. Cotton Specialist, Koilpatti	To be Reader in Plant Breeding.
Sri K. R. Nagarajan, crop and plant Protection Officer, Coimbatore	Leave for 22 days.
„ K. Kuppamuthu, Addl. Principal, R. E. T. C. Bhavanisagar	Dist. Agri. Officer.
„ B. W. X. Ponnayya, Millets and Pulses Specialist, Coimbatore	Leave for 60 days.
„ A. Subramaniam, Asst. Millets Specialist	To be Addl. charge of the Post of Millets Specialist, Coimbatore.

Upper Subordinate—Postings and Transfers

Name and Designation	Posted to or Transferred
Sri H. Boominathan, Certifying Inspector, Rajapalayam	Asst. in cotton (Extra Long staple Scheme) Srivilliputhur.
„ S. Sivaraj, Asst. in Cotton, Srivilliputhur	Certifying Inspector, Srivilliputhur.
„ S. P. Shanmugam, F. M., Varichoor	Ext. Officer in Agri., Madurai.
„ A. Dhandapani, Soil Cons. Asst. (Training Scheme)	Asst. in Soil Cons., Coimbatore.
„ M. Mahalingam, on completion of Soil Cons. Training	Asst. in Soil Cons. Scheme, Salem.
„ D. Abu Bucker, A. D., Wandiwash	A. D., Vijayanarayana, Tirunelvely.
„ K. Rajagopalan, Asst. in Paddy	To be relieved on 30—8—'58 to enable him to proceed to Delhi, in connection with his training in U. S. A.
„ John Chandra Mohan, Asst. in Paddy, Tirurkuppam (Drought Scheme)	Assistant in Paddy, Coimbatore, Vice K. Rajagopalan.

Name and Designation	Posted to or Transferred
Sri A. John Knight, Hort. Asst. Periakulam, Madurai	Instructor in Agri., T. Kallupatti.
„ M. Balachandran, Asst. in Mycology, Coimbatore	Assistant in Mycology, (Fungicides Scheme) Coimbatore.
„ S. Amirthalingam, F. M., S. S. Farm, Nattarasankottai	Assistant in Millets, Coimbatore (on the closure of the Farm).
„ V. Lakshmanan, Hort. Asst. on leave	Hort. Asst., Coimbatore.
„ C. Narayana Kurup, Hort. Asst., Coimbatore	Hort. Dev. Asst., Coimbatore.
„ M. K. Ganapathy, Agri. Ext. Officer, Radhapuram	Agri. Ext. Officer, Cheramadevi.
„ C. Ranganathan, Agri. Ext. Officer, Cheramadevi	Agri. Ext. Officer, Radhapuram.
„ T. S. Govindan, B. sc.,	Is appointed as Asst. in Chemistry and posted at ghee grading Laboratory, Coimbatore.
„ M. Gnana Henry Dias, B. sc., (Ag.)	Is appointed as Spl. A. D., (Khadi) Tirupur.
„ N. Ramu, M. sc., (Ag.)	Is appointed Breeding Asst., (Vegetable scheme) Coimbatore.
„ M. C. Muthiayan	Assistant in Mycology, (Vegetable scheme) Coimbatore.
„ N. Kaliaperumal	Fruit Asst. Model Orchard, Cum - Nursery, Periakulam, Madurai.
„ S. Sambamurthy, M. sc., (Ag.)	Is appointed Hort. Dev. Asst., Trichy.



Review of Market Conditions of Commercial Crops in the Notified Areas for the Month of July, 1958.

Cotton: In this section lint: Candy of 784 lbs.
Kapas: Pothi of 280 lbs.

Coimbatore District: Season: There were only drizzlings in most of the district during the month under report. About 25.5 m. m. of rain were reported to have been received in different parts in the district. Sowings of dry crops were delayed and yields of standing crops were somewhat affected.

Arrivals and Transactions: During the month the market started with an opening balance of 13421 candies of Cambodia and 1337 candies of Karunganni lint. The total receipts in the market were 7962 candies of Karunganni lint which included 2120 candies of Cambodia and 1325 candies of Karunganni locally ginned. The total despatches from Tirupur accounted for 9863 candies of Cambodia and 1828 candies of Karunganni lint sent to Madras, Salem, South Arcot, North Arcot in Madras State and Ahmedabad, Trichur and to places in Kerala and Andhra States. There was a closing stock of 11520 candies of Cambodia and 2288 candies of Karunganni lint.

Kapas: The kapas market opened with a stock of 30574 pothis of Cambodia and 6574 pothis of Karunganni kapas. The total arrivals into Tirupur during the month were 41046 pothis of Cambodia and 9001 pothis of Karunganni. The disposals during the month were 43919 pothis of Cambodia and 8855 pothis of Karunganni kapas in the market area of Tirupur. At the closing of the season there was a closing stock of 27701 pothis of Cambodia kapas and 6720 pothis of Karunganni kapas.

Market Committees' Chronicle

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Prices: Good demand continued for superior and average varieties of Cambodia and Karunganni cotton and the prices of these varieties increased by about Rs. 10/- per pothi of kapas (280 lbs) due to brisk buying by textile mills.

	Lint (per candy of 784 lbs).	Kapas (per pothi of 280 lbs).
Cambodia superior quality	Rs. 900—981	Rs. 140—150
" average "	Rs. 800—870	Rs. 110—125
Karunganni superior "	Rs. 871	Rs. 124

Ramanathapuram District: Season: There was no rain during the month except 0.42 cents at Virudhunagar. The conditions of the standing crop of Uganda is reported to be fair.

Arrivals and Transactions: The following were the arrivals, disposals and closing stocks of kapas and lint in important markets in the District during the month.

Kapas in pothis of 280 lbs:					
Name of market	Opening stock	Receipts	Total	Disposals	Closing balance
Virudhunagar	3,000	15,000	18,000	16,500	1,500
Sattur	500	18,000	18,500	18,000	500
Rajapalayam	...	33,000	33,000	32,000	1,000
Total	3,500	66,000	69,500	66,500	3,000

Lint in candies of 784 lbs:					
Virudhunagar	465	2,050	2,515	1,850	665
Sattur	150	1,700	1,850	1,700	150
Rajapalayam	230	2,200	2,430	2,200	230
Total	845	5,950	6,795	5,750	1,045

Prices: The following were the prices of cotton kapas, lint and seeds in the district during the month.

	Prices in Rs. per pothi of 280 lbs.	Lint in candy of 784 lbs.	Seed in Mds. of 82 2/7 lbs.
Karunganni	Rs. 87—96	710—815	8.50—10.50
Tinny Karunganni	Rs. 83—89	650—686	...
2nd Crop	Rs. 72—83	...	...
Tinny	Rs. 67—73	600—630	9.80—11.33
Uganda 1st quality	Rs. 112—150	...	...
" 2nd "	Rs. 96—116	...	...
" uncertified	Rs. ...	1101—1161	...
* Karunganni best	Rs. ...	815—850	...
Uganda	Rs. ...	...	7.33—9.00

South Arcot District: During the month the rains received were scanty and inadequate.

Arrivals and Transactions: Arrivals and transactions were negligible due to slack season. Arrivals amounted to 126 pothis and despatches to 152 pothis. The stock with the trade at the end of the month stood at 12 pothis.

Prices: The average prices of kapas during the month in Panruti and Villupuram markets were Rs. 90.50 and 77.65 per pothi respectively.

Groundnut: (In this Section Kernels are in candy of 531 lbs and pods in tons).

South Arcot District: Arrivals and Transactions: The Market started with an opening balance of 3131 tons of kernels. The arrivals of kernels amounted to 10292 tons from district produce and 1509 tons from other districts. The offtake by oil mills and country chekkus came to 5470 tons 372 tons respectively. Despatches to other districts totalled 5471 tons and 145 tons to Pondicherry. Wastages were calculated at 324 tons. The stock balance with the trade at the end of the month was 3148 tons.

Prices: The average prices in the several markets ranged from Rs. 150.15 to Rs. 176.50 per candy of 531 lbs. according to quality when compared to last month of Rs. 132 to 147.

North Arcot District: Season: Due to the failure of the rains during the month sowing of winter crop has not yet started in the district.

Arrivals and Transactions: During the month the arrivals increased slightly. The following were the stocks, arrivals, disposals and balances in the district.

	Opening balance	Arrivals	Disposals	Closing balance
Groundnut kernels (candy of 531 lbs.) ...	460	3936	3767	629
Groundnut pods (Tons) ...	123	2066	596	1593

Prices: The prices of groundnut and its product have gone up considerably this month as compared to the previous month.

The following were the prices of groundnut and its products during July, 1958 as compared to June, 1958.

	July, 1958.	June, 1958.
Groundnut kernels (Cdy. of 531 lbs.)	Rs. 140—190	Rs. 140—165.
Groundnut pods (Md. of 82 2/7 lb.)	Rs. 12.50—20	Rs. 9—16.50
Groundnut oil (Cdy. of 500 lbs.)	Rs. 300—342	Rs. 295—320
Groundnut cake (Md. of 82 2/7 lb.)	Rs. 8.25—10	...

Ramanathapuram District: Arrivals and Transactions: The Markets of Ramanathapuram started with an opening balance of 885 candies of kernels and 350 tons of pods with which included 1300 candies of kernels and 450 tons of pods were added. Disposals amounted to 920 candies of kernels and 550 tons of pods leaving a closing balance of 1265 candies of kernels and 250 tons of pods.

Prices: The opening and closing prices of groundnut and its product during the month were as follows:

Groundnut pods (Mds. of 82 2/7 lbs).	Rs. 16 — 20
„ kernels (ody. of 531 lbs).	Rs. 145 — 180
„ oil (ody. of 500 lbs).	Rs. 300 — 325
„ oil cake (Mds. of 82 2/7 lbs).	Rs. 9.00 — 11.00

Gingelly: (In this Section bag of 168 lbs).

South Arcot District: Arrivals and Transactions: The market started with an opening balance of 481 bags and arrivals into the markets amounted to 865 bags. The mill and chekkus consumed 5 bags and 406 bags respectively. Despatches to other districts were 6 bags. The stock with the trade at the end of the month stood at 929 bags.

Prices: The prices of gingelly per bag of 168 lbs worked out to Rs. 54 to 62 per bag according to quality in different markets as compared to Rs. 59.16 during June, 1958.

Tobacco: (In this Section tobacco is in candies of 500 lbs),

Coimbatore District: Arrivals and Transactions: At the end of the month under report there was a stock of 10960 candies of chewing and 430 candies of cheroot tobacco. About 2750 candies of chewing and 450 candies of cheroot tobacco were exported to South Arcot, Mathurai, Salem, Tirunelveli and North Arcot Districts of Madras State and to places in Mysore, Bombay, Kerala and Andhra States.

Prices: The price ranges were as follows:

Variety	Prices in Rs. per candy of 500 lbs.		
	I Grade	II Grade	III Grade
1. Chewing tobacco (Sun-cured):			
(a) Meenampalayam	325—400	250—300	125—220
(b) Other varieties	250—300	160—200	100—150
2. Cheroot varieties:			
Sun-cured grown in Erode and Bhavani Taluks	250—310	190—240	100—160
3. Chewing tobacco:			
Pit cured grown in Palladam and Suler areas.	250—310	160—230	80—120

Cardamom: Arrivals and Transactions: Arrivals of Cardamom in the different market centres in Mathurai district and Virudhunagar during July were as follows:

The estimated stock position of cardamom during July, 1958.

Name of centres.	Quantity in lbs.		
	Arrivals.	Despatches.	Closing balance.
1. Bodinaickanur	... 67,000	66,000	21,000
2. Thevaram	... 7,500	8,500	Nil.
3. Pannaipuram	... 5,000	5,000	—
4. Kombai	... Nil.	Nil.	—
5. Uthamapalayam	... 500	500	—
6. Cumbum	... 7,000	9,000	9,000
7. Gudaloor	... 1,000	1,000	Nil.
8. Pattiveeranpatti	... 10,329	5,329	5,000
9. Virudhunagar	... 20,000	23,000	7,000

Prices in Rs. per lb.

Bodinaickanoor, Mathurai and Thevaram Centres.

(1) Green	Rs. ... 9 to 10.50
(2) Extra green	„ ... 10 to 11.12
(3) Shipment	„ ... 8 to 8.75
(4) Seeds	„ ... 11 to 12.

Virudhunagar:

(1) Green	„ ... 9.25 to 9.75
(2) Extra green	„ ... 10.00 to 10.75
(3) Shipment	„ ... 8.00 to 8.50
(4) Seeds	„ ... 11.25 to 11.75

Pattiveeranpatti:

(1) Sundried	„ ... 9.25 to 11.45
„ inferior	„ ... 8.00 to 9.12
(2) Store green	„ ... 9.26 to 10.54
„ inferior	„ ... 7.90 to 8.88
(3) Seeds	„ ... 7.90 to 11.40
(4) „ inferior	„ ... 9.90 to 11.40
(5) Splits	„ ... 7.50 to 8.00
Lights	„ ... 5.72 ...

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Review of Administrative Activities of Market Committees during July, 1958.

General: The South Arcot Market Committee, North Arcot Market Committee and Coimbatore Market Committee continued to function briskly during the month. The Market Committees of Ramanathapuram and Tirunelveli could not function due to the cases pending with Supreme Court.

Enforcement: The progress of licensing by the Market Committees during the month was as follows:

Name of the Market Committees	Section 5 (1)		Section 5 (3)		Weighmen	
	A	B	A	B	A	B
South Arcot Market Committee	198	1682	159	1153	157	1123
North Arcot Market Committee	108	1028	78	852	22	482
Coimbatore Market Committee	212	970	148	782	78	534

A = Licences issued during the month.

B = Licences issued up to the end of the month from January.

Meetings: During the month a meeting of the Coimbatore Market Committee was held on 26—7—1958 and 49 subjects were discussed and passed. No meetings were held by other Market Committees during the month under report.

Quality Analysis: Nil.

Quality Competition: Nil.



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The Madras Agricultural Students' Union.

PATRONS.

1. Daman Bahadur C. Arunachala Mudaliar, Zamindar of Chunnampet, Chunnampet P. O.
2. Raja Sri Krishnachandra Gajapathi Narayana Dev, Parlakimidi P. O.
3. Sri V. C. Palaniyandam Gounder, M. L. A., Vellaikinar, Coimbatore Dist.
4. Dr. O. P. Ramaswami Iyer, Ootacamund
5. Sri Jeevandass, Varnasi, Parlakimidi P. O.
6. Sri Ramachandra Ananga Bhima Dev, Kesari Gajapathi, Raja Sahab of Budokhemidi, Berhampore, Ganjam Dist.
7. Rao Bahadur K. T. Alwa, Retd. Deputy Director of Agriculture, Mangalore
8. Sri R. K. Kandaswamy, "Brindavan", Tiruchi Road, Coimbatore
9. " G. D. Naidu, "Gopal Bagh", Avanasli Road, Coimbatore
10. " K. Thiruvankata Mudaliar, 34, 2nd Main Road, Gandhinagar, Madras-20.
11. " P. G. Karuthiruman, B. Sc., M. L. A., Nanjaipuliampatti, Thukkanaickenpalayam, P. O., (Via) Anthiyur, Coimbatore Dist.
12. " K. Venkataswami Naidu, B. A., B. L., Gopalapuram, Coimbatore
13. " C. V. Bashyam, "Dharma Vilas", Land Lord, Coimbatore
14. " V. C. Subbaiya Gounder, Gnanambika Mills P. O., Coimbatore
15. " M. S. Palaniappa Mudaliar, B. A., 125, Rajah Street, Coimbatore
16. " A. K. Balaramaraju, Land-Lord, Rajapalayam
17. " K. P. Amrithanatha Iyer, President, Co-operative Union Ltd., Ambalapuzha Taluk, Monkomp P. O., Kerala State
18. " N. S. Vydianatha Iyer, Sengalipuram, (Via) Kodavasal, Tanjore Dist.
19. " M. Subba Rao B. Sc., (Ag.) Mango Range, P. O. Nilgiris
20. " M. R. Balakrishnan, B. A., B. Sc. (Ag.), F. A. O., Irrigation Agronomist, Bangkok, Thailand
21. " S. Raja Iyengar, Land Lord and Agriculturist, Madurai
22. " K. Rangachari, Land Lord, 16, Old Munsiff Court Road, Saidapet, Vellore
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