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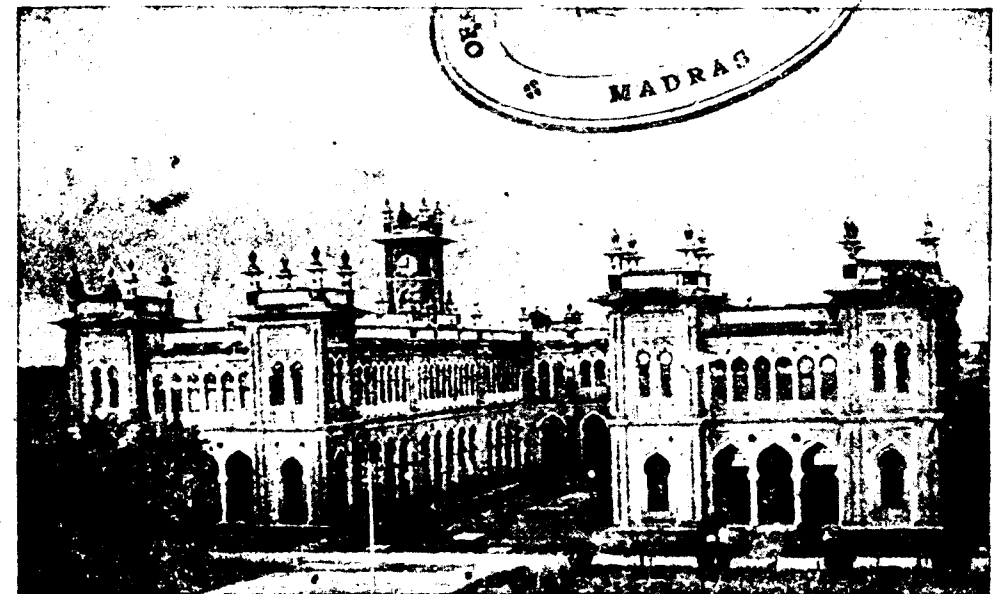
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84

Vol. XLV

September 1958

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AGRICULTURAL COLLEGE AND RESEARCH INSTITUTE, COIMBATORE

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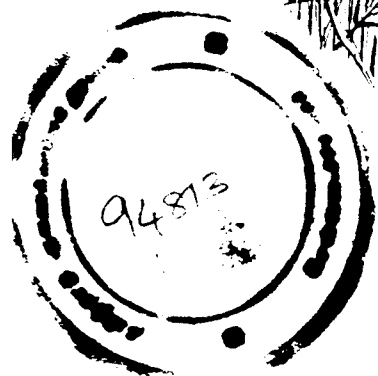
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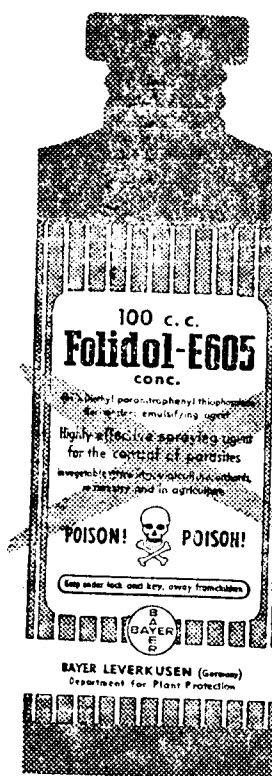
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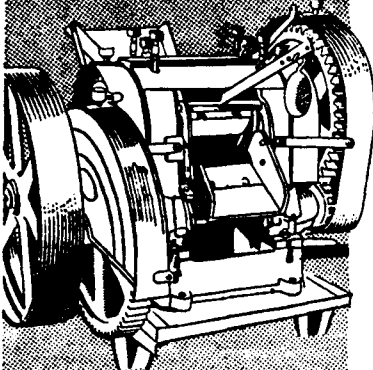
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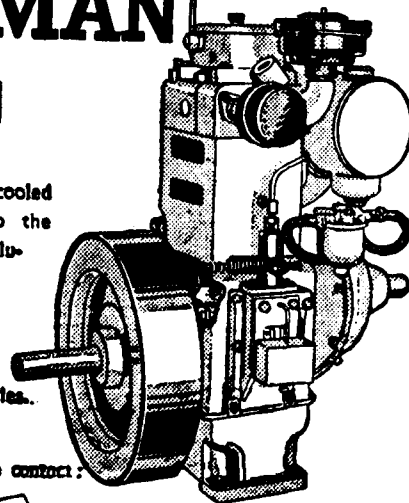
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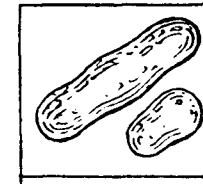
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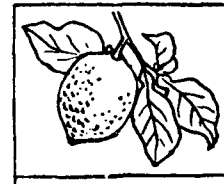
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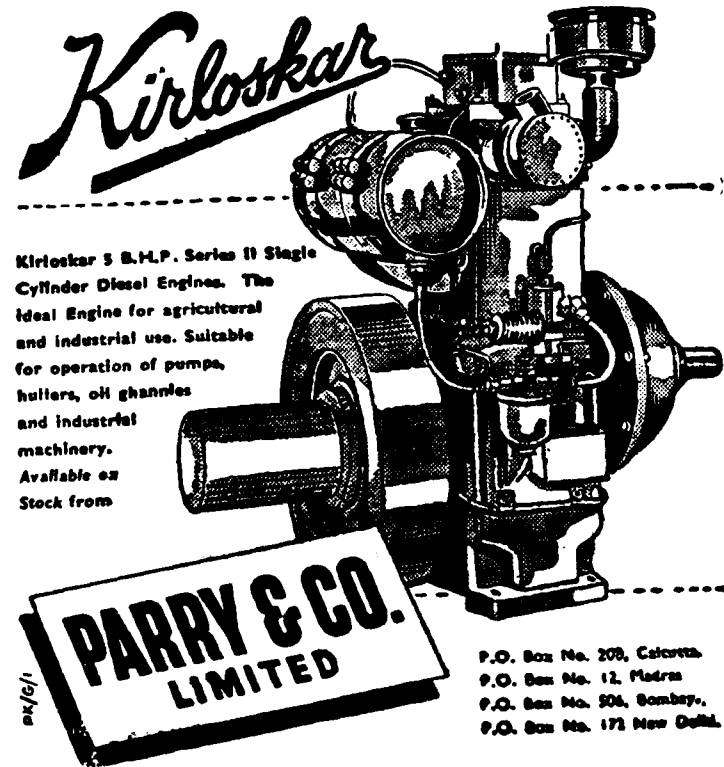
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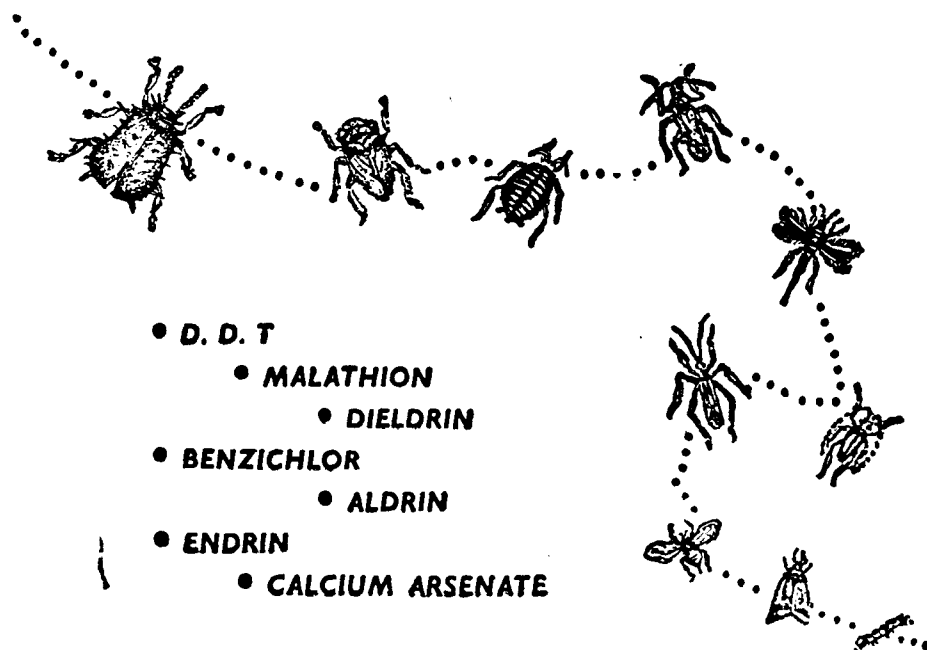
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THE MADRAS AGRICULTURAL STUDENTS' UNION

THE 41st COLLEGE DAY AND CONFERENCE

The 41st College Day and Conference organised by the Madras Agricultural Students' Union was held this year on the 31st August 1958 and 1st to 3rd September, with the usual eclat and enthusiasm.

Dr. K. Ramiah, an alumni of the Agricultural College, a former Paddy Specialist, Madras State and F. A. O., Rice Consultant and an old member of the Union inaugurated the conference on 31st. Incidentally it may be mentioned that he was the first alumni to inaugurate these annual functions. The Minister for Home and Agriculture Sri M. Bhaktavatsalam presided on the occasion. Sri P. P. I. Vaidyanathan, Secretary to Government, Food and Agricultural Department, Madras and Sri A. Venkatesan, Director of Agriculture were also present. The Joint Directors of Agriculture, the regional Deputy Directors, District Agricultural Officers and Assistant Research Officers from mofussil attended the conference. After a lapse of about two decades one senior upper subordinate from each bifurcated District of the State was deputed to attend the conference and this added colour to the occasion.

The conference commenced with a prayer at 4 p. m., on 31st August by Srimathi Savitri Nagarajan and Kumari Sukanya Bai and followed by the welcome address by the Principal in charge Sri M. Bhavani Sankar Rao. The Secretary, M. A. S. U., then presented the annual report of the Union. Prizes were then distributed by the Hon'ble Minister to the prize winning students and officers.

Dr. K. Ramiah then delivered his inaugural address *extempore* for about 40 minutes which was tape-recorded and reproduced elsewhere in this issue. In his address Dr. Ramiah laid special stress on developing rice strains with the morphological characters of *Indica* and the physiological characters of *Japanica*. The proceedings closed with a vote of thanks proposed by the Vice President and the singing of the National Anthem.

The second day's conference was devoted to departmental officers' subjects, presided over by the Minister for Agriculture. The whole day was occupied on discussion of various development

topics of which State seed farms, distribution of improved varieties of paddy, green manure and the assessment of their spread, figured prominently due to their importance.

On third day forenoon, the Farmers Day of the Central Farm was celebrated with Sri V. K. Palaniswami Gounder, M. L. A., of Vettaikaranpudur, Pollachi, in the chair. Sri M. Bhaktavatsalam, Minister for Agriculture, spoke on the occasion exhorting the audience to take greater interest in the Farmers day and benefit by exchange of views with the Agricultural Scientists assembled on the occasion. He also inaugurated the first "coconut week" and appealed to ryots and others to take to coconut cultivation so that the deficit in coconut production could be made good. In the evening the Eighth Scientific Workers conference was held, presided over by Dr. K. Ramiah. Dr. K. C. Naik, Dean, Agricultural College and Research Institute, welcomed the President and requested him to initiate discussion on the papers received for the conference. Out of eleven papers, five were presented by the authors and lively discussion took place. The other papers could not be taken up for want of time.

On the forenoon of the last day, visits to laboratories, Breeding Stations and Farms were arranged for the delegates and visitors. In the afternoon the College day sports were held presided over by Major K. M. Chinnappa and prizes were given away by Mrs. Chinnappa to the various prize winners in the evening. The past records in four sport events were broken during the year.

The General Body meeting of the Madras Agricultural Student' Union was held at 5-15 p. m., on 2-9-1958, after due notice to suit the convenience of the several delegates and visitors. The accounts for the year 1957-'58 and budget for 1958-'59 were discussed and passed. The Office bearers for 1958-'59 were also elected.

On the night of 30, 31st August and 1st September the Union arranged for a variety entertainment in which mono-acting, farces and dramas in Tamil and English were enacted. To accommodate the increasing audience for these entertainments these were staged on 3 days with the co-operation of the student members.

Welcome Address by Sri M. Bhavani Shanker Rao, Principal in charge.

It is my privilege as Principal of the Agricultural College and Research Institute and Ex-Officio President of Madras Agricultural Students' Union to welcome you all, the distinguished President, Chief guest and the ladies and gentlemen to the 41st College Day and Conference.

Our revered Minister for Home and Agriculture has become the architect and driving force behind the unprecedented developments in this Institute and Department during his stewardship. Dr. M. S. Randhawa, Vice Chairman, Indian Council of Agricultural Research had originally consented to inaugurate this College Day and Conference, but due to unavoidable circumstances, he had expressed his inability to be present and we are fortunate that Dr. K. Ramiah had graciously consented to inaugurate the celebrations, although we have taken him by surprise at the last minute. Dr. K. Ramiah is an old student of this College and a former Paddy Specialist who had literally spent his lifetime with the paddy plant. Everyone is well aware of his long association with the Madras Agricultural Students' Union. His wide experience of world conditions no less than his profound knowledge of agriculture are bound to make this event of more than ordinary significance. Our Secretary for Food and Agriculture has worked for this Institute with so much energy and devotion that it was possible to translate an erst-while dream of the post-graduate training course into a reality, within a record time. Our present Director of Agriculture has been with us just for a year but even before he entered our Department, his love and sympathy for Agriculture were well-known to many of us. On behalf of all those who are associated with this department and Institute and in the name of Indian agriculture itself, I feel proud in extending our respectful and cordial welcome to these leading benefactors of our agriculture.

In recent months there have been quite a few functions in this Institution which have attracted ladies and gentlemen in large numbers representing various walks of life. I need hardly say that it has always been a great pleasure to welcome them to our celebrations. It is indeed a matter for gratification that most of the leading men of the farming community as well as other leading citizens of Coimbatore and retired men of our department have once again responded so readily to our invitation and assembled here in such large numbers today. I extend a very cordial welcome to one and all of them.

In the history of every institution, there are certain periods so momentous as to be cherished for ever. The past year has been one such period. Quite apart from the large-scale expansion of the Institute, with the erection of a new College and hostel buildings to house the increased number of our students, the foundation stone was laid only a few days ago by our revered President, Dr. Rajendra Prasad, for an equally large set of buildings for the Regional Post-Graduate Institute and hostel. With the combined financial resources of the Madras State and the Central Government, as well as of the T. C. M. Organization, adequate new equipment and additional library facilities are being provided.

The College has a proud record of achievements to its credit. In the final year B. Sc. (Ag.) Examinations to students, Sri V. Srinivasan and Sri Jayaraj got I Class and large number of other students have also won prizes in various subjects, which will shortly be distributed by the chief guest of today. During the year these prizes have also been increased by the institution of more prizes from the donations collected during the Golden Jubilee Celebrations last year. Still more recently, the Governor of Madras, during his visit to the Agricultural College and Research Institute on 19th June 1958, has announced the institution of a rolling shield to be presented to the student, who does best in practical work in the field allotted to him each year. Another development of significance during the year in the field of extra-curricular activities is the formation of a N. C. C. Company, exclusively for the students of our College. Our past achievements and traditions at this Institute are well-known and we are striving to achieve still more substantial results in the future. The presence of the chief guest Dr. K. Ramiah in our midst with his world-renowned achievements, will prove a source of inspiration to one and all of the Agricultural workers and students assembled here.

I, once again, extend a very hearty welcome to our esteemed Minister for Home and Agriculture and to our Chief Guest, Dr. Ramiah, as well as to every one of you, Ladies and Gentlemen, assembled in this Hall.

Report of the Secretary, Madras Agricultural Students' Union

Revered President, Distinguished Guest, Ladies and Gentlemen,

I extend to you all a very hearty welcome to this annual function of our Union, which has been serving the cause of Agriculture for over forty one years. I have great pleasure in presenting to you on behalf of the Madras Agricultural Students' Union the report for the year 1957-'58.

It is indeed our unique good fortune that we are having with us today one of the most distinguished alumni of our college, Dr. K. Ramiah who is also an equally distinguished agricultural scientist, of whom our country itself is justly proud. He is not only a research worker of international renown in the field of rice improvement, but has also played a very important role in the Food and Agricultural Organization of the United Nations. I take this opportunity to express the deep sense of gratitude of the Union to Dr. Ramiah for having graciously accepted our invitation to inaugurate our College Day and Conference today. We consider it a matter of great pride, Sir, that the increasing importance of Conferences of this nature designed to promote the agricultural development of the country has gained its due recognition, as evinced by your gracious consent to guide us in our deliberations. Your presence here to day is not only an encouragement to us, but also a pointer to our responsibility in the co-ordination of the work of the scientist for the benefit of the tiller of the soil. The example of yours which is too well-known to need mention here, in such a worthy national venture, will always be a reminder to us to forge ahead with our endeavours in the fulfilment of the country's developmental plans and your mature experience can guide us to follow the right path.

It is our proud privilege to welcome to our midst, our popular Minister for Home and Agriculture, Hon'ble M. Bhakthavatsalam. His abiding interest in the welfare of the tiller of the soil and his direct method of solving the difficult problems that confront us have endeared him to one and all of us. He had been a great source of inspiration to our Union and it is needless to stress the remarkable efficiency with which he guides the activities of the Department of Agriculture in the State, steering clear of all impediments. We are sure that we will always find in him a rich mine of practical counsel to help us in discharging our duties.

The Madras Agricultural Students' Union: It was in the year 1911 that this Union was founded to serve as an effective medium to bring together the students of the past and the present to promote an *esprit de corps* among them to disseminate knowledge in agriculture. This Union which is an autonomous organisation found with the passage of time, a widening of interests as the scope and range of its activities got steadily expanded. Then it ceased to be a mere Students' Organization and became the forum for establishing contact between the various categories of its members, such as extension and research workers and progressive and practical agriculturists all over

the country. Through the medium of the Madras Agricultural Journal and the holding of annual Conferences, the Union has ensured co-ordination in planning and stimulated the propagation of knowledge pertaining to agriculture.

The Madras Agricultural Journal: This monthly Journal brought out by the Union continues to be an important medium for the publication of results of research done by Scientific Workers both in and outside India. The fact that articles published in the Madras Agricultural Journal are being reproduced and abstracted in the leading Scientific Journals of the world amply testifies to its high standard and it is, therefore, no wonder that it has on its exchange list about 83 periodicals both Indian and Foreign.

Market Committees' Chronicle: The Journal is issuing a monthly supplement entitled the "Market Committees' Chronicle", which is devoted to a factual record of the activities of the regulated markets for agricultural commodities in this State. We herein acknowledge with thanks the kind and unstinted help rendered by the State Marketing Officer in this context.

Finance: Limitations of finance have been the greatest impediment in the expansion of the activities of the Union. The income by way of subscriptions is not commensurate even to fully meet the expenditure on a single head i.e., the publication of the Madras Agricultural Journal. We place on record our gratitude to the Government of Madras for the annual grant of Rs. 1,800/- through the good office of our Hon'ble Minister for Home and Agriculture, to whom this Union is highly indebted. We fervently appeal to every Agricultural worker in our country to join our fold and strengthen this Organization to serve the cause of Agriculture.

The College Day and Conference 1957: The celebration of the annual College Day and Conference is one of the important activities of the Union. The Fortieth College day and Conference was celebrated with great pomp and eclat between Third September and Eighth September 1957, as it synchronised with the Golden Jubilee year of the Agricultural College and Research Institute, a significant milestone in the development of agricultural education and research in this State. The conference was inaugurated by Sri Nallasenapathi Sarkarai Manradiar, Pattagar of Palayakottai with Sri T. S. Avinasingam Chettiar to preside over the deliberations. Our Hon'ble Minister for Home and Agriculture graciously associated himself with the functions.

A symposium on 'Integration of Agricultural Research, Education and Extension' was organised by the Union, under the presidency of Dr. K. Subramaniam D. Sc., F. B. S., Regional Botanist, Southern Circle, Botanical Survey of India. The subject aroused considerable interest and a number of workers participated in the proceedings.

Patrons: We are glad to state that two leading agriculturists from Tanjore and South Arcot districts have become the patrons of the Union during the year.

Elocution Competition: The Union conducted an elocution competition in English for the students of the College on the subject entitled "*The Place of Fundamental Research in the Programmes of the Central and the State Departments of Agriculture*" Kumari Vijayalakshmi Moosad and Shri Krishna Ballal won the first and Second prizes respectively for the second year in succession. We are extremely thankful to Prof. Ivan G. Fay of the T. C. M. Shri T. R. Narayanan and Prof. Mariakulandai for having kindly acted as judges for the competition.

Prizes and Awards: In addition to the Ramasastrulu Munagala Prize, seven awards and three rolling shields were instituted from the donations received on the occasion of the Golden Jubilee celebrations, in accordance with the desire of the donors. Further the Union had the unique privilege of instituting "Hon'ble Sri Bakthavatsalam's Medal for Horticulture" and "Hon'ble Sri Subramanyam's Medal for Plant Pathology" for the best outgoing student in the subject concerned, to commemorate their visit during the Annual Hostel and Club Day celebrations on 16-3-1958. "Shri Sambamurthy's Medal for Agricultural Economics" has also been instituted. Out of the munificent donation of Rs. 2,000/- graciously offered by Sri V. C. Palaniswami Gounder and Sri V. V. Kaliswamy Gounder a prize entitled "V. C. Vellingiri Gounder Gold Medal" was instituted. Moreover Golden Jubilee Rolling shields for Agricultural Research have also been endowed for the subject of Agricultural Botany, Agronomy, Horticulture, Agricultural Entomology and Plant Pathology, from among the donations offered by Shri. Veeraraghavalu Naidu, Shri. T. Konda Reddy and Shri. M. Lakshminarayana Reddy. Besides, other prizes for the best research worker in sugarcane and cotton and for the best student in Agricultural Practical and *viva voce* were also instituted in the name of the donors.

Retirements: During the year under report the following members of the Union retired from active Government Service. (1) Sri M. S. Subbiah, Assistant Entomologist. (2) Sri U. Achutha Warriar, Seed Development Officer and (3) Sri M. Rayappa Pillai, Superintendent, Agricultural Research Station, Bhavanisagar. We wish to place on record the sincere appreciation of the part played by them in the growth and activities of this Union in various capacities and helped materially in the advancement of our aim in furthering the cause of agriculture in our country. We specially thank Sri M. Rayappa Pillai in his abiding interest and continued support to the Union. Sri Achutha Warriar was one of our previous Secretaries of the Union. We wish them all a happy and peaceful retired life.

Obituary: We record with profound regret the demise of one of our distinguished members Sri C. Vijayaraghavan. Mr. Vijayaraghavan who retired in 1949 as the Head-quarters Deputy Director of Agriculture, had served the Union very well in various capacities having been the Secretary, the Editor and the member of the Managing Committee for a number of years. We convey our sympathies to the bereaved family.

Acknowledgement: It is now my pleasant duty to express, on behalf of the Union, our thanks to all those who have helped us in various ways during the past year. We are extremely grateful to our esteemed Minister for Home and Agriculture Sri Bhaktavatsalam for his abiding interest in the affairs of our Union and for having willingly associated himself in all our functions in the past, as in the present. To Sri P. P. I. Vaidhyanathan, Secretary, Food and Agriculture, Madras and Sri A. Venkatesan, Director of Agriculture, Madras, the Managing Committee is highly obliged for the kind help and guidance in all matters pertaining to our Union and to Dr. K. Subramanyam, Regional Botanist, Botanical Survey of India, we tender our heartfelt thanks for initiating the symposium last year. We wish to place on record our deep sense of gratitude to Dr. K. C. Naik, Dean and Additional Director of Agriculture, Agricultural College and Research Institute, Coimbatore, for his sustained and personal interest in all our activities and for his valuable help and guidance in all matters. We are immensely grateful to Shri M. Bhavani Shankar Rao, Principal in charge, for his ready help and advice in all matters connected with our Union. Our thanks are also due to all the ladies and gentlemen who helped us in many ways for the successful conduct of the College Day and Conference with abiding interest in 1957 and this year.

Opening Speech by the President, Sri M. Bhaktavatsalam, on the Occasion of the Agricultural College Day, Coimbatore, on 31-8-1958.

We have gathered here to-day on the occasion of the 41st College day and Conference of this Agricultural College and Research Institute. Fifty-one years have elapsed since Coimbatore became a centre of Agricultural Research and Education, and last year, we celebrated the Golden Jubilee of this Institution. A few weeks back, we had the pleasure of seeing the institution raised to the level of a Regional Post-Graduate Institute with the blessings of the President of India. In the course of the 51 years of its existence much has been achieved by this Institution, and we can take credit for having provided both men and material for many of the outstanding successes achieved on an all-India scale in several crops like sugarcane, paddy and millets. Three weeks back when we had our President in our midst, I had occasion to recapitulate some of our achievements during these 51 years. We legitimately take pride in these achievements, but at this critical juncture, in our history, it is not wise to spend any more time on thinking about what we have done in the past. The task before us in this field of agriculture is still immense in magnitude which requires all our resources and energy. Thus all our past achievements may be useful, only to the extent they give us greater confidence in our ability to tackle the more difficult tasks lying before us in the immediate future.

An important feature of this College Day is the composition of this Conference itself. We have here to-day most of our Principal Research Workers in Agriculture, as well as most of the officers dealing with Agricultural Extension. We have also a small representative group of officers in charge of Community Development and so this Conference can claim to represent all aspects of work relating to Indian Agriculture. This Conference provides the forum for regular inter-change of ideas between the officers responsible for Research. Much is heard to day about integration of agricultural education, research and extension. A conference of this type provides a good occasion when such integration can be brought about in the attitude and outlook of the different wings of the Department of Agriculture. Almost all the District Agricultural officers here are students of this institution and have regularly maintained their contacts with this institution particularly at the time of the Annual Conference. This Conference therefore enables the institution to weave its history into the making up of everyone of the officers of this department.

Research is all for the good, but research in agriculture is of no significance unless it is placed side by side with extension. Until we make everyone of our new ideas available to the farmer and see that he adopts them, agricultural research will remain an unfulfilled task. Before the last War, agricultural research was carried on with the object of benefitting the ryots, but the matter was not considered as one of extreme urgency. But during the last 7 or 8 years, we have all become aware of the fact that a rapid increase in agricultural production forms the very basis of our development plans. The research worker is also now aware that he holds the key for future development of agriculture, and the time at his disposal for achieving definite ends is pretty short. I think the chief change which has been brought about in the last few years in our attitude towards agricultural research is an intense awareness of the urgency of the need for rapid advances in research and immediate transmission of the results to the farmers.

I do not mean that our achievements during the last 7 or 8 years have been inconsiderable but I only wish to emphasise that we should concentrate on the task yet to be done. Let me first briefly survey what we have been able to achieve during the first Five Year Plan and the first two years of the Second Plan in the production of food. The beginning of the First Five Year Plan found our food production very low mainly due to repeated failure of monsoons. In the year 1952-'53, our food production was about 33 lakhs tons which was well below our actual requirements. From the year 1953, onwards, we have fortunately enjoyed good seasonal conditions and agricultural production has returned to normal. Still, this normal was not sufficient to feed all the population of this State and we had to depend to some extent on food imports. But as the food production plans gained in momentum the gap in our food production gradually was filled up and we have become self-sufficient with an annual production of over 46 lakhs tons. I would not bother you with too much of statistics; but I can claim that as a result of the various measures we have adopted during the First Five Year Plan, our food production has definitely increased by nearly 6 lakhs tons. This is in addition to the increase caused by the improvement in the monsoon.

So in the First Five Year Plan, we were able to achieve an increase in food production of the order of 20 percent and because of this we felt emboldened, and have now set for ourselves an ambitious target of an increase in food production of 29 per cent in the course

of the Second Five Year Plan. It is rather too early to give a fair assessment of the success we have so far met in implementing such an ambitious plan, but provisional figures are available for the actual achievement. In the First Year of the Plan, Food Production has increased by more than two lakhs tons which is about 4.3 per cent increase in a year. In the second year of the Plan (i. e. 1957-'58), we have not been so successful because of the serious difficulties experienced in meeting the demand for fertilisers on account of the restricted supplies. But in spite of all these difficulties, we have been able to achieve a further increase in production of about one lakh tons.

There are many who summarily dismiss agricultural statistics unreliable. No doubt, there are many difficulties in arriving at accurate statistics of agricultural production, but even the worst critic must concede that we are definitely improving in the methods of collection of statistics, and the statistics we are now able to compile are fairly accurate - at least so far as comparing two successive years is concerned. To those who do not attach importance to agricultural production statistics, I may point out the statistics available for movements of foodgrains by rail. We know that most of the foodgrains in the south are moved by rail especially when the movement is over long distances such as from Tanjore to Cochin or from Rajahmundry to Madras. There are no doubt some quantities of rice arriving into Madras State by road is much less than the quantity moving out of our State by road. The railways are able to give us very accurate statistics of the quantities of rice which are coming into the Madras State, and these figures have to be accepted. They show that four years ago, the present Madras State was a net deficit State, but gradually it has become slightly surplus. The net export outside the State was small in the beginning being about one lakh tons a year. No doubt, this small net export is due to four successive years of good monsoon, and we cannot claim that we are self-sufficient in an average year; but they at least show that we have reached self-sufficiency in a satisfactory year. I may mention in this connection that our Secretary, Agriculture has conducted some studies into this line, and he tells me that during the years 1937 to 1942 when Madras State experienced a long spell of very favourable monsoons, the regions composing the present Madras State were still importing about 1.35 lakhs tons of foodgrains every year. The position was not much different during the rationing days, i. e., upto 1952, and so you could

I request you to bear with me. It is purely due to lack of time that I could not put everything I want to speak in a cogent way. I will just give you some ideas of what has been happening to this most important food crop of the world and just take you by way of comparing the position as it existed today in India with the conditions that exist elsewhere either in Asia or in America. I am going to give you a little back-ground history, historical back-ground rather, of the present position of rice production in the country. You are all familiar with the difficulties we had to undergo during and immediately after the World War II. The East Asia which used, on an aggregate, to export out of this region to elsewhere, a total quantity of 4 million tons since the war is now importing rice. Of course, I need not go into the details how this situation came about but it is enough to point out that this region which was a net exporter of rice is now a net importer of rice. The only remarkable change that has happened in the production of this most important crop is that certain countries which never were important in the production of this crop have almost come to the forefront. For instance, U. S. A. - I do not think myself or any of the students can say, that U. S. A. is an important rice-growing country. But still, it is now the third largest country that exports rice to the rest of the world. It exports nearly 9 million tons - the third largest, next to Burma and Thailand. The coming in of U. S. A. into the world market has had certain repercussions. Often we have, rather, we hear complaints of the rise in prices of the commodity. Before America came into the market, the price of rice in Asia was comparatively lower. Because of the increased higher cost of production in America, when it came into the market, the American rice was high in price. The other two exporting countries, viz., Burma and Thailand, naturally said that "we are exporting also, why should not we get the same price as the American rice". That is one of the main reasons for the higher prices of the rice in the last ten years. Some of the large exporting countries namely Burma and Thailand have been actually making a complaint to the International Organizations, that this new country is competing with them and catching their market although it did benefit them in increasing their quantity of export. You might have known, that in the last three years, just to meet the request of these rice surplus countries of Asia, America passed a legislation or made an arrangement to actually reduce its area by 25%. But what actually happened was, the total yield went up by another 10 per cent. When you want to increase the area under particular crop naturally the best land

suitable for that crop was already under it; expansion means bringing in of marginal lands or that are not ideally suited to the crop. So when they removed the crop from the area which was not ideally suited for rice and use all their improved techniques in the best lands the yield was pushed up much further. This example you can find practically in every other country. For instance, since the war every country has been trying to increase its rice production, the surplus as well as the deficit countries. The surplus countries are interested in increasing their production simply because they want to export more. Their whole economy depends upon the quantity of rice they export, mainly Thailand and Burma and the importing countries, because of the high prices, find it difficult and the Government finds it an extraordinarily inconvenient proposition to pay large amounts to import food from other countries. So everybody, either it is a deficit country or a surplus country, was interested in increasing production and what had been happening, is there has been tangible improvement in the world production, particularly in Asia since 1951-52. Here I have got to mention again the cases recently quoted from America, that the so-called increase, has been largely brought about by increasing the area under the particular crop. Though it serves the purpose of meeting your deficit, yet it is not the ideal way of improving the production. Other countries like Burma, Thailand and Indo-China have more land that can be brought under rice. It is not the case, at any rate, with India. The moment we try to increase the production by bringing more land under rice, I am sure, the overall acre yield will go down for the whole country. In this connection, I had occasion to study the average yields of the ricegrowing countries of Asia. I got figures from the different countries and I do not want to worry you with details and I would like to give you two examples one from India and one from Japan, the two largest, present deficit countries of Asia. Both of their deficits, is roughly of the order of nearly 2 million tons a year. Now in the case of Japan, if you compare the acre yields over the last 50 to 60 years, you find the yield from the beginning gradually increasing though not very steady and yield curve line was almost a horizontal line during the years of war between 1940-'46, and you will be surprised to hear that there has been since 1945, another increase of 15 to 20 percent, the yield line being almost straight. Now in the case of India if you take and compare the acre yields of the last fifty years', you will find that the yield curve is coming down from nearly 2,000 pounds or 1800 pounds of paddy to 1100 pounds or 1200 pounds at the present day. Of course,

the comparison in fall between the two countries is not legitimate. You see Japan has only about 7 million acres while some of our States, for instance, Madhya Pradesh or Utter Pradesh has got it, or probably the present Madras State has got up to $4\frac{1}{2}$ millions. The comparison is therefore not quite valid. I had a careful discussion with Dr. Panse, Statistical Adviser to the Indian Council of Agricultural Research, New Delhi and he had made a study with regard to the acre yields of rice in different States. He had compared Madras, Andhra, Utter Pradesh and Bihar. The actual position is, that in Madras, the yield is almost steady or there is a tendency for increase while in the other extreme, in the State of Utter Pradesh the trend is for the acre yields to go down. You have been just listening to some of the figures which the Hon'ble Minister was telling us. That figures you must remember refers to the total production. Actually he has examined the pre-plan period and the last three years for the whole of India. There is an increase in acre yields of an order of about 16 to 17 percent for the whole country but this increase has been mainly brought about by the increase in Madras, Andhra and to some extent in Mysore. In the other States, practically there has not been any perceptible change between the pre-plan and the plan period. So you can well congratulate yourself, that so far as total increase in acre yields is concerned, Madras and Andhra take responsible position.

Now if you compare the acre yields of countries you can roughly put them in three categories 1. above 30° north latitude and 2. between 30° to 20° and still a third 20° and below. You will find the acre yield of these three regions is roughly in the proportion of 3 : 2 : 1. I was a Rice Consultant with the Food and Agricultural Organisation some four or five years ago. I had collected data from a number of countries on this question and tried to find out why there is such large difference. Is it a question of the climate or the rainfall, or the soil, or the different cultural practices or the land tenure or the varieties that are grown and so on? Some of you may be familiar with a small bulletin which was issued by the Indian Council of Agricultural Research about three years ago. In that, I had just outlined what are, in my view, the chief reasons that account for this large difference. The only two countries that are still below India in acre yields, are Ceylon and Philippines. There are two countries particularly Java and Malaya which record very much higher yields than ours. I am referring for the whole of India though it may not be quite right for an audience in Coimbatore, in the research centre of a most enlightened Province, but after all we

are Indians, we are not Madras here, we are not Andhras there and Bengalis there. We have been considering the deficit of the whole country. If with the facilities existing, we increase production in one part of the country it is only for the benefit of our own motherland. China and Malaya, record average yields which we record in Tanjore and Godavari. Now you are all familiar with the chief techniques about which one often talks, how to step up the acre yields still further. They are, in general terms, improving soil fertility, improving varieties, improving techniques of cultivation or preparation of the land and better control of pests and diseases. I want to tell you only about one particular aspect namely the improvement of varieties. But to increase in production, the different factors that control production, are in the order I mentioned - improvement of soil fertility, improvement of varieties, improvement of the cultural practices and control of pests and diseases. You may roughly take that the scope of increasing the production are in that order. Now, with regard to the second aspect of improvement in yield by spreading improved varieties which has been my favourite field in which I have spent my career in this Institute, what is the scope and what we can do. You are all familiar as Botanists that it is not the same variety that is grown everywhere. Of course, all the cultivated crops belong to two species but by our intensive studies both in the laboratory and in the field we can recognise distinct special species. One is the familiar race *Indica* that is grown all over the tract up to 25 degrees North and South latitude. Then, there is the second race, the *Japanica* which is grown mainly in regions above 30 degrees north and south latitude. There is an intermediate which is called *Indica-Japanica* which is morphologically *Indica* but physiologically *Japanica*. This arose in the course of evolution. You might probably know that *Indica* is the older of the races. The later geographically arose out of this by cultivating the crops under different environmental and climatic conditions. Now, how is it that Japan has been able to increase the yield to such a large extent? One reason was the fertility of the soil, and another more important is the improved varieties which can be grown in these fertile conditions. Now the problem that struck us is, can we make a cross between these two races and produce a type which will suit the local conditions but at the same time have the characteristics of the *Japanica* giving higher response to improved fertility. This question was raised and I suggested to the Food and Agricultural Organization that it might be taken as a Co-operative Scheme for which a large number of countries should take part and you all know

the details. It was started actually at the Central Rice Research Institute, Cuttack and a crossing programme was done, with the parent material obtained from different countries and crossed material were sent back to them to be grown under particular environments and to suitably select the progenies that suit their conditions. I would not go into the details but this has been supplemented by the work of the Indian Council of Agricultural Research which was suggested by me in the year 1951 and we have sent out this breeding material to different States and it has been dealt with in different ways by different people according to the facilities and the convenience or whatever the staff that were available to them. We have got now some progenies in the F. 5 to F. 8 generations and I am told that a small scale trial has been made in Coimbatore and Palur and extensive trials are being conducted and I hope that something useful will come out of it. This has been dealt by other countries and by us in India. The differences in the facilities and the attention that was paid to the material had in some places bettered the results, and there has not been better results in some other places. The only reason for any failure which I attribute to, is that there has not been sufficient care in the choosing of the parents. In fact, besides a higher response to fertility from the *Japanica*, there are three or four other characters which can be transferred. One is the stiff straw and the second is the non-sensitive photo-period. Some varieties are highly sensitive to photo-period and some are not sensitive, and some are very less sensitive and one of the characters which we can find in the *Japanica* is the non-sensitiveness to photo-period. Another character is non-shattering in varieties. There is a considerable loss of production by shedding of grains in the field. These are some of the features that can still be transferred to our *Indica* group. With stiff straw there is also savings of straw, and straw is very valuable to India because it is one of the important cattle food in the Delta where nothing else is got, whereas if you take Burma, Thailand and Indo-China, where, when harvested, the straw is left in the field and is set fire. The straw has no value there. But my experience and research tells me that for more straw you should go for more and more varieties from Thailand, Burma and of those inter-racial varieties of the group-the *Japanica-Indica*. They are very shy to tiller and therefore we have to combine these characters and of course the other purposes for which the breeding can be intensified with which you are all familiar. For instance, you have now made a notable contribution in Madras particularly in evolving the Co 25 strain. After all, it has

taken nearly 20 years. I remember that I first started this work of crossing to produce *piricularia* resistant variety in 1937 and it has borne fruit after 20 years. Some of our administrators have to be told that this is not a long period, if you can achieve something useful. What is it that happened in the case of rust resistant varieties of wheat? Rust resistance was a genetical character and it was recognised only in the beginning of this century but it took nearly 25 years to produce actually the rust resistant strains of wheat elsewhere. Research has ceased to be what it was some years ago. So far as I can go round and compare what things were in my days, and even later and what they are now, I am sorry to say and I hope I would not be misunderstood, that there is too much of regimentation in research. I have had occasion to visit actual research centres in different parts of the world. For instance, in Japan you select a most suitable man, you give him a problem, and the facilities and leave him alone and only ask him after a few years. But here we have a tendency to ask, for six month's report, monthly report, annual report etc., It may be alright from the point of the administration. But so long as you have selected the proper person and you have given the right problem, you have to see him moving on the right lines, only give him certain amount of latitude. I should like, if it is possible, it should be done. There should not be so much of regimentation as I find it happening in India. Of course, we may all be happy over the results of the breeding of new varieties and all that but it is not going to contribute too much in increasing your production, unless the variety you produce is grown on a large scale by the farmers. The demonstrators have to realise the benefits of seed schemes and I might tell you Madras, still, is far ahead of the other States. For instance, some States where it had been started as early as in Coimbatore, the total spread is still of the order of 20 to 15%. I am told that we have reached 60% of which I feel proud of. But this naturally takes us to the next question. After all you produce a variety, you produce the seed, you must know the conditions under which that variety would give the best results. In olden days there was a tendency for the research workers to work in isolation but it is necessary to coordinate breeders with Chemists, physiologists etc., Now we know that you cannot get the best out of a variety unless you provide for it the ideal conditions. The Japanese, during the last 12 years have established, beyond no doubt, that unless you improve the soil conditions you do not get the best return. So the Botanist as he did in olden days cannot afford to ignore or to keep aloof from other problems connected with rice breeding. At least in

Madras, we recognised some years ago but others are yet to realise this. In fact, since March of this year I am working in honorary capacity as Special Officer for Rice with the Ministry of Food and Agriculture and I have had an occasion to visit some of the Indian States to set up an organisation similar to what we have in Madras.

Now there is another question connected with this set up. Some of the foreign visitors and even in northern countries there is a criticism levelled against combining crop breeders or Botanists for individual crops. The criticism being that it makes the outlook of the Breeder narrow and that he does not get a wider outlook, but I am not in a position to appreciate that criticism so far as rice is concerned, because rice is grown on a large scale, not as Sugarcane, Bananas etc. The conditions under which rice is grown vary from the conditions under which any other crop can be grown. Therefore, the whole attention paid to a single crop is not a waste of effort and I still believe that so far as, at least, paddy is concerned a single Specialist is all to the good.

There is only one aspect for which I should very much like to draw your attention. That is the research on chemicals. Insecticides have been so remarkable in the recent years that there is no reason for us to loose any crop, deemed as affected by insects. We have got indeed an effective organization to have the insecticides and the fungicides made available to every village and to every farmer. Of course, so far as the Extension is concerned, I have been going round about the States, and I often have heard much more intensive work was being done by the Department before this Community Development Blocks and National Extension Services were established. I am not prepared to pass any remarks on this Community Development. There is something to be said for and against this, and that is, the Community Development must come to the stage of cooperating and integrating the work of the Agricultural Department with that of the Community Development Department, so that the results of research are actually placed at the disposal of the farmers.

Now I think I have nothing more to talk and I have taken plenty of your time. I once again thank you for the opportunity you have given me to visit my old College. Ever since the Madras Agricultural Students' Union was started I have been actively associated with it for nearly two decades in various capacities as Manager, Treasurer, Secretary Sub-Editor and so on and after I left Coimbatore in 1937, I think this is the First College Day I have come here to inaugurate and to be in your midst. Thank you.

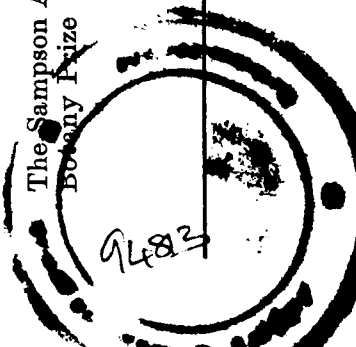
Prizes.

No	Name of the award	Name of the Winner	Prize to be given
1	Ramasastrulu Munagala Prize	Sri D. John Durairaj	Medal
2	V. C. Vellingiri Gounder Gold Medal for the best Research worker of the Department	Sri T. R. Subramaniam	Medal
3	N. Veera Ragavulu Naidu Golden Jubilee Rolling Shield for Agricultural Botany	Sri J. Saktharam Rao	Shield and Medal
4	T. Konda Reddy Golden Jubilee Rolling Shield for Agronomy	Sri C. M. Bhakthavatsalu	Shield and Medal
5	Hon'ble Sri M. Bhakthavatsalam Medal, for the best outgoing student in Horticulture	Sri S. Jayaraj	Medal
6	Hon'ble Sri C. Subramaniam Medal, for the best outgoing student in Plant Pathology	Sri V. Srinivasan	Medal
7	Elocution competition	Kumari Vijayalakshmi Moosad	Prize I
	"	Sri Krishna Ballal	" II
8	Govt. of Madras Chemistry Section Golden Jubilee Shield for best Research worker in 1958	Sri Dhanapalan Moosi.	

A certificate of merit will also be awarded to the above winners.

Name of Prize	Particulars of qualification for the selection	Name of Prize Winner
1 The Robertson Prize	For the best student who obtains the highest number of marks in the subject of Agriculture in the Final Examination of B. Sc. (Ag)., degree and qualifies for the degree at the first appearance both in the second and final year examination.	V. Srinivasan
2 The Clogstoun Prize	For the best student who obtains the highest number of marks in all the College Terminal Examinations and passes all the B. Sc. (Ag) degree Examinations at first appearance.	S. Jayaraj
3 The Kees Prize	For the best student who obtains the highest number of marks in Agricultural Chemistry of the Final Examination of B. Sc. (Ag)., and takes the degree without failing	S. Kunjithapatham
4 The Dewan Bahadur R. Ragunatha Rao Prize	For the best student who obtains the highest aggregate number of marks in practical Agriculture in all the College terminal examinations and in practical Agriculture of the final examination of B. Sc. (Ag)., and takes his degree at the first appearance and has not failed in any examinations.	V. Srinivasan

Name of Prize	Particulars of qualification for the selection	Name of Prize Winner
5 The D'Silva Memorial Prize	For the best student who obtains at first appearance the highest number of marks in animal hygiene of the Second year B. Sc. (Ag)., Examination for the degree and qualifies himself for a pass in the examination.	Pitchiah
6 The Goschen Prize	For the best student who obtains the highest number of marks in agricultural zoology of the second year of the B. Sc. (Ag)., examination and passes the first and second examinations at the first appearance.	P. K. Ramesh
7 The Anstead Prize	For the student who stands first in Class II in plot cultivation (wet, dry and garden) and passes the first and second year B. Sc. (Ag)., examinations at the first appearance.	P. K. Rangiah Gounder
8 The Rao Bahadur K. S. Venkatarama Ayyar Prize	For the best student in the first year class in the B. Sc., (Ag)., course	A. S. Tennakoon
The Sampson Agricultural Botany Prize	For the best student who obtains the highest number of marks in the subject of Botany in the Final examination for the B. Sc. (Ag) degree and qualifies himself for that degree at first appearance in all the three Examinations.	V. Srinivasan



No.	Name of Prize	Particulars of qualification for the selection	Name of Prize Winner
10	The Dewan Bahadur S. De Swamikannu Memorial Prize	For the best student who takes the B. Sc. (Ag)., degree passing all the three annual examinations at the first appearance and who secures the highest number of marks in the aggregate in all the three examinations put together.	S. Jayaraj
11	The Food and Agricultural Organisation Prize	For the best student who obtains the highest number of marks in Chemistry in both the College terminal and university examination of the second year B. Sc. (Ag)., put together.	N. Sundarasan
12	The Food and Agricultural Organisation Prize	For the best student who obtains the highest number of marks in Agricultural Chemistry in both the College terminal and university examination of the second year B. Sc. (Ag)., put together.	T. S. Manickam
13	The M. K. Nambiar Prize	For the best student who obtains the highest marks in the Second B. Sc. (Ag)., Examination at the first appearance.	T. S. Manickam
14	The Gupta Memorial Prize	For the best student who secures the highest number of marks in the subject of agricultural engineering in the second examination of B. Sc. (Ag)., at the first appearance in the subject.	C. B. Krishna Ballal

Report of the Managing Committee for the year 1957-'58

The Managing Committee have the honour to present the following report of the activities of the Union for the year 1957-'58.

Membership: The strength of the Union as it stood on 31st August 1958 was 1231 as against 1198 during the last year. It now consists of 201 Officers, 486 students members, 109 resident Officers, 390 subscribers (including those on exchange basis) and 45 patrons.

The committee would earnestly entreat one and all of those present here to do their utmost in strengthening the Union further, by enlisting new members and subscribers.

Office bearers: There was no change in the office bearers of the Union except for the nomination of Sri K. Rajagopal, as the member of the Managing Committee in the vacancy caused by the transfer of Shri. V. N. Madhava Rao.

Meetings: The Managing Committee met on twelve occasions during the year under report, to transact business of the Union.

The Madras Agricultural Journal: The Journal was published regularly during the year and the Editorial Board met at regular monthly intervals for selecting articles for publication and transacting other business connected therewith. The special supplement on the activities of Market Committees in the State were issued regularly and the Managing Committee is grateful for the valuable assistance received from the State Marketing Officer and for the co-operation of the Market Committees concerned. The promptness in bringing out the Journal in time and the maintenance of a good standard was made possible solely due to the untiring efforts of the Editor and the members of the Editorial Board. We record our appreciation for the unstinted co-operation of the Secretary, Coimbatore Co-operative Printing Works Limited, in the prompt and neat execution of the work entrusted to the press.

Finance: The financial position of the Union is not very affluent as we would wish it to be. We, however, managed to function as many of our worthy predecessors did with unabating zeal. But it is

a matter of great concern to the Union to note that many of our colleagues are yet to enroll themselves as members to support this age old institution. The gracious annual grant of Rs. 2,800/- by the State Government to augment our resources and to publish the symposium number of the Journal, is hereby acknowledged with gratitude. Due to the re-organization of the States the contributions from the Market Committees have dwindled from Rs. 1,000/- to Rs. 590/-. In spite of the fact that our Journal has become a good medium for advertisement in colour as well as in black and white, it does not seem to go a long way in improving our position. We, therefore, fervently request every one of the Departmental Officers to join the Union and strengthen this Organization to serve better, the cause of Agriculture.

Prizes and Awards: The responsibilities of the Union have increased manifold in being the sole custodian for many awards and prizes instituted from among the various donations received on the occasion of the Golden Jubilee Celebrations of last year.

The following are the prizes awarded to the candidates noted against each.

- | | | |
|-----|--|--|
| 1 | Ramasastrulu Munagala Prize | Sri D. John Dorairaj |
| 2 | V. C. Vellingiri Gounder Gold Medal for the best research worker of the Department | Sri T. R. Subramaniam |
| 3 | GOLDEN JUBILEE ROLLING SHIELDS: | |
| (a) | N. Veeraraghavalu Naidu Shield for Agricultural Botany | Sri J. Saktharam Rao |
| (b) | T. Konda Reddy Shield for Agronomy | Sri C. M. Bhakthavatsalu |
| (c) | O. M. Lakshminarayana Reddy Shield for Horticulture | No entry |
| 4 | (d) G. Rangaswami Naidu Prize for the best research worker in Sugarcane | The rules for the award are yet to be framed |
| 5 | Ramakrishna Medal for the best research worker in Cotton | |

- | | | |
|---|--|--|
| 6 | Hon'ble M. Bhakthavatsalam Medal for the best outgoing student in Horticulture | Sri S. Jayaraj |
| 7 | Hon'ble C. Subramaniam Medal for the best outgoing student in Plant Pathology | Sri V. Srinivasan |
| 8 | S. Sambamurthy's Medal for the best outgoing student in Agricultural Economics | Will be awarded next year after investment |
| 9 | Krishnaswami Naidu's Prize to the best student in Agricultural Practical & Viva voce | Rules are yet to be framed |

Our thanks are due to various scientists who acted as referees in adjudging suitable candidates for the above awards.

Patrons: Two agriculturists from South Arcot and Tanjore Districts have volunteered to become the patrons of our Union and we extend the Union's welcome to them.

Acknowledgment: The Managing Committee gratefully acknowledges the whole-hearted support of all the members in running the different activities of the Union successfully. We are highly indebted to Dr. K. C. Naik, Principal now Dean of Agricultural College and Research Institute for his abiding interest in our affairs and guidance and sincere help in all matters of the Union. We also thank Sri M. Bhavanishanker Rao for his kind interest in us. We place on record our deep sense of gratitude to all the convenors and members of the various Committees for their unstinted help and hearty co-operation.

Proceedings of the Annual General Body Meeting of the Madras Agricultural Students' Union held on 2-9-1958

The Annual General Body Meeting of the Madras Agricultural Students' Union was held on Tuesday the 2nd September 1958 with Sri T. Natarajan, Vice-President in the Chair. There were 95 members present in addition to student members.

After the president declared the meeting open, the Secretary read the minutes of the previous general body meeting which was passed and unanimously adopted.

The Annual Report, the Auditor's Report and the Budget Estimates for 1958-'59 were then presented by the Secretary. On the chair pointing out that the accounts were well maintained and the estimates drawn up correctly as per requirements, Dr. S. Kanakaraj David moved and Sri. A. Abdul Samad seconded that all the reports be adopted in toto.

Keen discussion ensued in the matter of institution of various awards from among the donations received on the occasion of the Golden Jubilee Celebrations of 1957. Dr. A. Mariakulandai and Sri. M. J. David were of the opinion that some prizes should be awarded for the extension workers also. The General Body requested Sri. K. M. Sundaram and Sri. K. H. Subramania Ayyar to discuss this issue in the ensuing meeting of the officers of the Extension wing of the Agricultural Department and decide on the subjects for which awards are necessary and how best to evaluate them if instituted.

Then the change in the procedure for election of office bearers of the Union came up for discussion. The General Body resolved to introduce the system of postal ballot for election of the following office bearers of the Union viz. The Resident Vice-President, the Editor and the Secretary from next year. It was left to the Managing Committee to work out the complete details to introduce this system.

It was resolved by the General Body that no change in the name of the Union need be envisaged now and that the original name, Madras Agricultural Students' Union be continued.

The suggestion of the Director of Agriculture, Madras to modify the Union's constitution and functions to fit in with State Farmers' Forum was also discussed at length by the General Body and it was resolved that it may not be feasible to integrate these two organisations with any special advantage to the Union.

Sri. M. V. Jayaraman drew the attention of the General Body to the fact that the usual annual symposium was not conducted during this year and on the President's explaining the circumstances that led to the cancellation of the symposium, the matter was dropped from further discussion. However, it was informed that in future besides suggesting the subject for a symposium, the alternative of general papers for the conference may be also included.

The election of office bearers was then proceeded with and the following were elected for the year 1958-'59.

Dr. A. Mariakulandai, Resident Vice-President.
Sri. T. Natarajan, Editor.
Sri. V. Subbiah, Secretary.

Council

President
Resident Vice-President
Editor
Secretary

Mofussil Vice-Presidents

Sri. C. R. Seshadri
„ A. Muhamad Ali
„ T. S. Francis

Mofussil Members

Sri. K. M. Sundaram
„ M. J. David
„ T. Srinivasan
„ K. H. Subramaniam
„ E. G. Sivaswamy

Resident Members

Sri. A. H. S. Sarma
„ T. Sivasubramaniam
„ A. Maharaja (Student)
„ K. S. Sundaresan (Club Secretary)

Managing Committee

Sri. G. Tulasi Das (Manager)
„ M. Stephen Dorairaj (Treasurer)
„ F. L. Daniel (Member)
„ C. M. Bhakthavathsalu
„ A. Subramanyam
„ A. Abdul Ravoof (Student)
„ K. S. Sundaresan, (Club Secretary)

Editorial Board

Editor
Secretary
Manager
Sri. C. V. Govindaswamy
Dr. S. K. David
Sri. C. Balasubramania Mudaliar
„ A. Maharaj (Editor-Tatler)
„ K. S. Sundaresan (Club Secretary Ex-officio)

Sri. F. L. Daniel proposed that the sense of appreciation and gratitude of the general body be recorded to the retiring Committees for their efficient record of work.

The meeting then terminated.

College Day Sports :

The College Day Sports were conducted on a grand scale on 3rd September 1958, as the culminating event of the forty first college day. There was a smart march past by the athletes and the N. C. C. Cadets, when Major K. M. Chinnappa, Commandant, 4th Madras Battalion, took the salute.

Sri Gopalakrishna Shenava of the Second B. Sc., (Ag)., class won the championship obtaining seven first places. He knocked off both the Vengail Krishnanayanar cup and M. R. Balakrishnan cup

for the total aggregate and for being the best athlete in the track events respectively. Sri K. Ramaswamy who was the second best athlete created new college records in cross-country race and in Javalin throw. As many as six college records were broken during this year's meet; Sri Arthanariswamy accounted for High Jump and Pole-vault; Sri Joe Mathias for Discus throw and Sri K. C. Medappa for 1500 metres race.

After a few introductory remarks by Sri T. Natarajan, the Vice-President, M. A. S. U., Major K. M. Chinnappa gave a short speech. Mrs. Chinnappa gave away the prizes to the winners of the various events as in the list given below:

Events	First	Second	Time or Distance.
100 Metres	Gopalakrishna Shevna	Manu Selvanayagam	12 Sec.
200 Metres	"	K. Ramaswamy	26 Sec.
400 Metres	"	"	57.4 Sec.
800 Metres	"	George Varkey (included last year)	2 Min. 19.4 Sec.
1500 Metres	K. C. Medappa	Balakrishnan	4 Min. 49.2 Sec.
5000 Metres	K. C. Medappa	K. Ramaswamy	18 Min. 26.8 Sec.
110 M. H.	Gopalakrishna Shevna	K. Ramamoorthy	20 Sec.
200 M. H.	"	Manu Selvanayagam	30 Sec.
Long Jump	A. K. Muthuswamy	Joe Mathias	19' 2½"
Hop, Step and Jump	Gopalakrishna Shenava	S. Chockalingam	39' 1"
High Jump	Arthanariswamy	G. Viswanathan	5' 4½"
Pole vault	Arthanariswamy	G. Viswanathan	9' 5½"
Javalin	K. Ramaswamy	Joe Mathias	153' 5"
Discus	Joe Mathias	Gopalakrishna Shenava	95' 4½"
Shot Put.	Joe Mathias	Gopalakrishna Shenava	33' 5"
Hammer	Joe Mathias	Rangiah Gowder	58' 2"
Cross Country	K. Ramaswamy	James Frederick	34 Min. 9 Sec.
Obstacle	P. M. Marappan	James	

8th SCIENTIFIC WORKERS' CONFERENCE

2nd SEPTEMBER, 1958

(Abstracts of the papers)

Studies on the Pre-treatment of Seeds with Chemicals II. The Effects of Pre-soaking the Seed in Various Chemicals on Some Important Crop Plants

by

T. R. Narayanan, S. Gopalakrishnan and K. Vasudeva Menon

The practical possibilities of the method of seed pre-treatment with nutrient chemicals was explored in a research scheme sponsored by the Indian Council of Agricultural Research from 1952—1957. This scheme was worked in the Plant Physiology section of this Research Institute and a number of crop plants were studied and tested for their response to various nutrients supplied by the pre-soaking method. The results obtained in regard to paddy have been recently published; in this paper, the results obtained in the case of certain other crops viz., cholam, cumbu, ragi, maize and cotton have been presented and discussed.

The results indicate that pre-soaking of seeds in appropriate nutrient salt solutions does produce distinct improvements in growth as well as in final yields, but the degree of response is liable to be modified by various factors. The method is also likely to prove helpful in mitigating the adverse effects when crops are grown in soils deficient in plant nutrients.

With regard to the economic aspects, the method is inexpensive as well as convenient. The cost of pre-treatment is in no case more than six rupees per acre, while the gain per acre amounts often to twice or three times the expense incurred in pre-treatment. The method can therefore be suggested as a convenient one for supplying an initial part of the plants' requirements and has the further convenience that the remainder can be supplied at reduced rates by normal manuring or by foliar sprays.

The Combined Effect of A-Strain Potentiality, B-Levels of Irrigation and C-Doses of Manuring (A + B + C Trial)

by

A. Dhanapalan Mosi, Dr. A. Mariakulandai and F. L. Daniel

An experiment in the strip-plot design was laid out with the object of finding the effect of irrigation, different levels of manuring and strains on yield. The crop chosen was cholam. Three levels of irrigation and three levels of manure were tried with three strains of irrigated cholam—Co. 4, Co. 12 and Co. 18.

The results are very interesting. Co. 18 behaves entirely different from the other two strains. It responds to manuring and irrigation very well. Co. 4 also responds to a limited extent to heavy manuring and heavy irrigation, whereas Co. 12 appears to show a depression with heavier doses of manuring.

The protein content and mineral content were determined both in grain and straw. Co. 18 is found to be more nutritious than the other two strains.

Statistical significance was worked out for the yields of straw and grain and was found to be significant for yields of grain and straw. However, the interaction - Strains X Manures - though significant is not much meaningful as manures alone is not found to be significant.

Sorghum breeding in America—practical achievements

by

B. W. X. Ponnaiya, B. sc. (Ag.) M. sc.

This paper is the outcome of the author's trip to U. S. A. to the various Sorghum Breeding Stations in the States of Nebraska, Kansas and Texas. The achievements of the American scientists in Sorghum breeding is high lighted and it is discussed how far these can prove useful for the improvement of the Indian crop. The important among them are the evolution of types suited for machine harvest, incorporation of yellow endosperm into the grain, evolution of Chinch bugs and smut resistant types and fixing of low HCN content plants. Utilisation of hybrid vigour for increasing the grain yield phenominally has been stressed as the most important among these. The importance of the determination of manurial and spacing requirments for each new standard variety evolved has been brought out. The fact that sorghum grain is used not only as animal feed but also for industrial works like the manufacture of flour to be used as adhesive or sizing paper etc., has been stated.

Regarding the techniques which would prove useful for the sorghum work in Madras State it is suggested that the Indian breeder should fix straight long peduncled types with uniform height at least in the shorter Indian types so that they can be grown in the large mechanised co-operative farms. Work on the incorporation of yellow endosperm into the Indian sorghum and fixing low HCN fodder types and also studies of smut resistant types under Indian conditions have already been taken up at the Millet Breeding Station, Coimbatore. Although the American hybrids have given high yield as a summer crop under irrigation its direct introduction is not possible as the quality of grain is very poor as compared to the local types. However, hybrids between the Coimbatore standard strain Co. 18 and American male sterile line combine Kafir 60 and the combination of Bombay strain M—47—3 and the same American

male sterile line have given indications of high yield of grain coupled with quality. In case the Indian types have the restorer gene as Milos of America these combinations can be passed on to economic tests.

Nearly 30% of the population of Madras State subsist on millet grain and they belong to the poor group. As India is developing into a classless society it can be reasonably presumed that before long at least 30% of the food consumed by every person in the State should be millet grain. Hence it is imperative that research on the production of more palatable and easily digestible cereal food from sorghum and other millets have to be taken up.

The Cytogenetics of the Interspecific Hybrid *Sorghum halepense*, Pers (2n—40) x *S. durra* Stapf. (2n—20)

by

N. Krishnaswami, V. S. Raman, P. Chandrasekharan and D. Krishnaswami

The meiosis of the hybrid between *S. halepense* (20—40) and *S. durra* (2n—20) is discussed in this paper in comparison with the observations made by the American workers on the reciprocal hybrids. The hybrid formed chromosome associations ranging from 30_I to 4_I+2_{III}+4_{II}. Out of 103 cells examined, 52 revealed 1—4 quadrivalents, 45 showed 1—8 trivalents and the rest formed only bivalents and univalents. The average association per cell was found to be 0.79_I+2.34_{III}+7.4_{II}+5.02_I.

The hybrid between the 20—*halepense* and the grain sorghum forms 10 bivalents only. On this basis, the triploid hybrid under investigation should be expected to form 10_{III} or 10_{II}+10_I. However, since this triploid hybrid forms quadrivalents and univalents also, the inter-relationships of the 20 and 40—chromosomed Johnson grass and the cultivated sorghums become complicated.

The genome of the grain sorghum appears to be related to both the genomes of the 40—*halepense*. It has been indicated that only the hybrid between the 20 and the 40—*halepense* will throw some light on the genomic constitution of the tetraploid Johnson grass. The 20—*halepense* hybridises easily with the grain sorghums and in the progeny of the resulting fertile hybrids, recombination of characters are noticed, suggesting that *S. halepense* is closely related to the grain sorghums.

Effect of ploughing—deep and shallow in Garden Lands

by

T. Natarajan, M. D. Prabhu, V. Muthu Perumal and C. Sankaranarayanan

The traditional view of agriculturists in India and abroad is that thorough cultivation of land results in good crops.

Researches in the west indicate that the traditional methods are not always the best for crop production—yields of field crops in general are either unaffected or actually reduced by extra cultivation.

Past research in Coimbatore and Koilpatti in Madras State have indicated that deep ploughing did not produce differential yields from shallow ploughing or even scraping with guntaka, with cotton, cumbu or cholam in dry lands.

In garden lands one would expect cultivation to produce different results from dry lands. In the past experiments in the Central Farm from 1943-'49 no significant differences were noticed between shallow ploughing with a country plough and medium ploughing with an iron plough "the P. S. G. 16-C". Increase in the number of ploughings also did not affect the yields of garden land crops-Cambodia Cotton, *Chitrai Cholam* and *Ragi*.

In the experiments under review effects of shallow (country plough and deep (victory plough) ploughings in Coimbatore with different irrigation levels, 20, 25 and 30 acre inches and manure doses (30, 60 and 90 lb. N per acre) were tested in a factorial experiment for four years on two crops of *ragi*, *cholam* and Cambodia Cotton. The soil of the field in which the experiment is conducted is loamy in texture, well supplied with plant nutrients N. K. P. and with high water holding capacity and also well aerated.

The effects of ploughing, shallow and deep were not significant in any year with all the crops though there were slight increases in either grain or straw yields of *ragi* and *cholam* in favour of deep ploughings. There were no significant interaction effects between tillage and irrigation levels or manure doses applied, indicating that tillage was independent of irrigation levels and manuring given. These results require to be further tested as these have great agronomic and economic significance.

Studies on Anthracnose of Banana,

by

Sarojini Damodaran and K. Ramakrishnan

The Anthracnose or *Gloeosporium* fruit rot is a disease of ripe bananas in storage or in transit in countries likely West Indies and Australia. But in India the disease has been observed only in the field, causing a rot of very young fruits and fruits starting to ripen.

Owing to reports of increased incidence of the disease, a survey was made and the incidence was found to range from 10 to 15%.

In this paper, the results of investigations carried out on 15 fresh isolates of *Gloeosporium musarum* Cke & Masses from banana fruits collected during 1957-1958 are presented. The object was to make a detailed study of the symptomatology and the nature of the pathogen with reference to variations if any.

In literature the symptoms described are the distal end and main stalk rot. The present study however has revealed the following symptoms.

- (1) Premature ripening of the fruits,
- (2) The browning and blackening of mature and immature fruits.
- (3) No blackening as above but with profuse orange acervuli.
- (4) Small circular specks on the rachis and green fruit and splitting of the rachis.
- (5) Shrivelling of fruits and change of colour to greenish yellow, yellow, brown to almost black.
- (6) Blackening and drying of fruits which remain attached to the Central stalk.

This study has revealed that the symptoms of the disease are extremely variable and seem to depend very largely on the varieties infected.

The results of inoculation studies with 15 isolates of *Gloeosporium* on nine varieties of bananas are as follows:—

(1)	Isolates infecting 9 varieties	2
(2)	" " 8 "	4
(3)	" " 7 "	2
(4)	" " 6 "	Nil.
(5)	" " 5 "	4
(6)	" " 4 "	2
(7)	" " 3 "	1
(8)	" " 2 "	0
(9)	" " 1 "	0

In cultural studies, on oats-agar medium, four types of growth could be observed.

- (1) Mycelium submerged without any black stromata.
- (2) Mycelium submerged or aerial with few black stromata.
- (3) Mycelium submerged, white crust like or slightly aerial with profuse production of large black stromata.
- (4) Mycelium white at the periphery, submerged, with acervuli in concentric rings.

The observations made here confirm that pathogen occurs in a multiplicity of strains in nature. This emphasises the need for a thorough study of the pathogen before launching on a programme of breeding for disease resistance.

Brief notes on a few crop pests noted for the first time in Madras

by

T. S. Muthukrishnan, K. R. Nagaraja Rao, T. R. Subramanian,
I. P. Janaki and E. V. Abraham

Interesting information on seven species of insects *Xyleborus morstalli*, Hag., *Xyleborus discolor*, Bland, *Lyctus africanus*, Lesne, *Geococcus coffeae* Green, *Geococcus citrinus*, Kuwana, *Glyphodes bivittalis*

Green, *Stegana lateralis*, V. D. Wulp and on the root knot eelworm *Heterodera marioni* Cornu, noted for the first time in this State as pests on new hosts of considerable importance, has been recorded. A brief account of the description, host range, life history, habits, together with connected important references of each species is furnished in the parent article.

The first mentioned pest was reared from the shoots of Avocado plant, at the Fruit Research Station, Kallar and was causing the wilting of the affected branches. *Xyloborus discolor* Bland, was noted to damage cacao plant at the same station by tunnelling through the stems. *Lyctus africanus* Lesne was seen for the first time as a pest of *Glycyrrhiza glabra*, under storage conditions. *Geococcus coffeae* Green and *G. citrinus* Kuwana, are new addition to the existing known Indian species of coccids and were noted respectively on sweet potato at Coimbatore and betel vine in parts of North Arcot District. *Glyphodes bivittalis* Green, caused considerable damage to the foliage of Jack trees at the Fruit Research Station, Kallar. The Drosophilid fly — *Stegana lateralis*, V. D. Wulp is a serious pest of agathi — *Sesbania grandiflora* grown as a standard for betelvine in parts of Coimbatore District. The eelworm incidence is apparently on the increase during recent years in this State. A serious infestation of *Heterodera marioni* Cornu, was noticed on the oysternutvine — *Telfaria pedata*, at Kallar.

The authors are indebted to the Indian Council of Agricultural Research and the Government Entomologist for financial assistance and facilities given in making the above observations.

Interculture in Paddy Cultivation

by

A. Abdul Samad, V. Srinivasan, K. Thandavarayan and S. Sethuraman

As a result of research and long experience the Paddy Section has evolved the best and the cheapest method of paddy cultivation to get the maximum profit for the Madras farmer. But in the year 1953 the promoters of the Japanese method of paddy cultivation claimed that intercultivation of paddy crop helped in increasing the yield. Though a few experiments in the past had been conducted on this aspect, definite information on the merits of intercultivating paddy crop was not available. It was, therefore, felt necessary to conduct an experiment to test the benefits of interculture. Accordingly, the experiment was started in the year 1955-'56 in six research centres and continued for three years, but the results obtained in the three centres, viz., Coimbatore, Aduthurai and Palur are reviewed in the paper.

The experiment was laid out under normal manuring as well as the Japanese method of manuring with the long duration strain Co. 25 and planted in lines to facilitate interculturing. A uniform spacing of

10"×10" was given, planting four seedlings per hole. Height, tiller counts and root measurements were recorded before and after each intercultivation and at the time of harvest. The experiment included treatments to facilitate the comparison of the Japanese rotary inter-cultivator and hand rake against hand weeding. The intercultivation was given thrice during the crop growth while hand weeding was done twice.

The results show that (1) there is no difference in yield between the treatments with intercultivation, with either the rotary intercultivator or the hand rake and the local method of hand weeding.

- (2) the absence of weeding depressed the yield
- (3) Weeding by using intercultivating implements was cheaper than hand weeding.
- (4) Japanese method of manuring for paddy was superior to the Madras method of manuring.
- (5) the Inter-cultivation has no effect on the growth, tillering panicle length and number of grains for panicle and has also no effect on the development of root system.

Influence of rainfall on the yields of K. 2 Karunganni Cotton at Koilpatti and Coimbatore

by

M. V. Jayaraman and C. Balasubramanian

The role of environmental factors in crop-growth and production has long been recognized. But to express the effect of environmental factors on crop-production in quantitative terms collection of elaborate data on a long range basis under different soil-climatic zones is required. The crop-weather experiments conducted on an All India basis aim at this goal. In Madras State these experiments on cotton are being conducted at Coimbatore and Koilpatti. In order to study the influence of rainfall on the yield of K. 2 Karunganni cotton in these two centres the data collected for nine years from 1948-'49 to 1956-'57 were correlated with rainfall, received at both the stations. The study revealed a marked difference of response of this crop to the rainfall received during its different growth phases at these two stations. This may be due to the difference in the soil-types, the red soil at Coimbatore requiring more copious and frequent rainfall than the black soil at Koilpatti.

Certain morphological features aiding classification of banana

by

V. N. Madhava Rao and K. M. P. Nambisan

The classification of bananas has been a subject of much controversy. Linnaeus, Roxburgh, Baker, Schuman, Jacob and several others attempted to classify the cultivated bananas but none of their dissertations helped towards a firm solution of the problem. It was left to Cheesman to give a sound rooting to the claims of the present day varieties for their origin from *Musa acuminata* Colla and *Musa balbisiana* Colla.

Systematic descriptions of 178 banana varieties were recorded at the Central Banana Research Station, Aduthurai and in the course of a review of the descriptions, certain morphological characters aiding the grouping of bananas have emerged and these have been presented in the paper. The following is a brief list of such characters.

(1) Plant vigour, (2) characters of pseudostem, (3) characters of petiole (4) characters of inflorescence (5) characters of male bud, bunch and fruit.

Cheesman has recognised three groups in the horticultural varieties of bananas, viz., (i) the *balbisiana* assemblage, (ii) the *paradisica* assemblage and (iii) a group of hybrids showing intermediate characters of *M. balbisiana* and *M. acuminata*. The stature, vigour, nature of the petiole, male bud characters, pigmentation of floral parts, hairiness or otherwise of the peduncle, shape and nature of fruits and seed characters were taken as the criterion for the identification of these three groups. The studies at the Central Banana Research Station, Aduthurai have shown that besides the above major characters, certain other features such as prominence of loris, angle and pigmentation of the inflorescence, persistence of male flowers and bracts may help the identification of varieties, particularly of those that have originated as hybrids of the two species. The supplementary characters listed in this paper would help in easy grouping of these varieties.

Studies in Earliness of Rainfed American Cotton in Madras

by

Sri R. S. Annappan

Observations on comparative earliness in seven cultures and strains of rainfed American cotton under main strain trial at Periyakulam during 1956-'57 and 1957-'58 are summarised in this paper. Earliness has been recorded by the node number of the first sympodium, earliness in flowering up to end of December relative to total production per unit for the season, and earliness in crop arrival up to mid-February relative to final yield. Bartlett's earliness index, a formula for quantitative expression of earliness in harvest, recommended by the Indian Central Cotton Committee has also been recorded. A comparison of the results from these methods shows that PK 719 and local unselected bulk are respectively the quickest and slowest to mature on all the records. In regard to the other varieties, though the earliness trend is almost the same, the similarity is not consistent. In breeding for earliness it would therefore seem desirable to determine Bartlett's index as a routine in addition to other methods in order to have reliable information on effective earliness of different varieties under study.

Weather Review — for August, 1958.

RAINFALL DATA (IN INCHES)

Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January 1958
North	Madras (Meenambakkam)	5.4	+ 0.8	12.0
	Tirurkuppam*	8.7	+ 2.7	14.9
	Vellore	8.0	+ 2.3	17.9
	Gudiyatham*	6.7	+ 5.3	16.5
East Coast	Palur*	6.0	+ 0.6	
	Tindivanam*	4.3	— 0.5	11.6
	Cuddalore	7.1	+ 2.3	13.3
	Nagapattinam	1.8	— 1.3	5.9
	Aduthurai*	3.3	— 1.3	9.6
	Pattukkottai*	8.7	+ 5.3	17.2
Central	Salem	9.7	+ 3.2	21.1
	Coimbatore (A. M. O.)*	1.2	+ 0.0	10.8
	Coimbatore	1.8	+ 0.6	11.8
	Tiruchirappalli	5.6	+ 1.6	11.7
South	Mathurai	4.8	+ 0.7	12.7
	Pamban	1.2	+ 0.6	10.6
	Koilpatti*	2.2	+ 0.7	9.9
	Palayamcottai	2.6	+ 2.0	12.4
	Ambasamudram*	1.0	+ 0.7	19.2
	Nagercoil*	7.0	+ 5.5	28.0
Hills	Kodaikanal	5.2	— 1.8	32.3
	Coonoor*	2.0	— 0.9	35.2
	Ootacamund*	6.5	+ 3.5	33.4
	Nanjnad*	6.7	0.0	43.7

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

Scattered to localised showers were received during the month of August, 1958 except for three days when weather was mainly dry throughout Madras State.

On 1-8-'58, rainfall was scattered in Madras State. Rain or thunder-showers occurred locally in Tamil Nad for six days from 2-8-'58 due to the development of an upper air trough off the Kanara-Konkan coast. Another trough was found extending over the Southwest Bay Bengal and the adjoining areas of Madras State on 6-8-'58. The monsoon was active in Kerala on 7-8-'58, while Madras State experienced only localised showers at a few places on 8th and 9th, though fairly widespread rain occurred on 10th August, 1958. On 11-8-'58 rain or thundershowers occurred locally in Madras State and the weather was mainly dry on 12-8-'58. Tamil Nad received only localised showers on 13th and 14th, whereas rain occurred at a number of places on 15th, followed by mainly dry weather on 16-8-'58. For five days from 17-8-'58 only localised rain was received in Tamil Nad. While the monsoon was active in coastal Mysore on 22nd and in Konkan on 25th, rainfall in Tamil Nad was either scattered or localised for six days from 22-8-'58. Mainly dry weather prevailed in Madras State on 28-8-'58 followed by localised showers for the next three days of the month.

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

Noteworthy rainfalls			
No.	Date	Name of place	Rainfall in inches
1.	6-8-1958	Palayamcottai	2.25
2.	7-8-1958	Tirurkuppam	2.68
3.	8-8-1958	Ootacamund	2.04
4.	10-8-1958	Tirurkuppam	3.00

Zonal rainfall (in inches)			
Name of Zone	Rainfall for August, 1958	Departure from normal	Remarks.
North	7.2	+ 2.8	above normal
East Coast	5.2	+ 0.9	"
Central	4.6	+ 1.4	"
South	3.1	+ 1.7	"
Hills	5.1	+ 0.2	just above normal

Agricultural Meteorology Section,
Lawley Road Post, Coimbatore-3.
15th August, 1958.

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

Departmental notifications

Gazetted Officers — Madras Agricultural Department
Postings and transfers during the month of September 1958.

Name and designation	Transferred or posted to
Sri N. Sankaranarayana Reddy,	Earned leave from 26-8-'58 to 27-9-'58 and thereafter posted as Agricultural Engineer, office of the Director of Agriculture, Madras.
„ T. S. Palanivelu,	General Superintendent, Govt. Industrial Engineering Workshops, Madras.
„ K. Kuppamuthu,	Additional Lecturer in Agriculture, Agricultural College, Coimbatore.
„ V. Sethuraman,	Assistant Cotton Specialist (Karunganni scheme) Koilpatti, in addl. charge of K 2 and Co. 4 combined scheme, Koilpatti.
Dr. V. Santhanam,	Reader in Genetics, Coimbatore.
Sri B. Santhanakrishnan,	Temporary State Marketing Officer, Madras from 15-9-1958.
„ M. Mukundan,	Temporary Dy. Director of Agriculture, Tanjore.
„ A. Azimudin,	Field Manure Officer, Coimbatore.
„ A. R. Seshadri, Addl. Lecturer in Entomology, Coimbatore	Earned leave for 11 days from 9-9-1958 to 19-9-1958.
„ V. Krishnaswami,	Recalled from leave and posted as Asst. Paddy Specialist for the evolution of Paddy strains for inundated areas.
„ K. Natarajan, Asst. Agricultural Engineer, Soil conservation scheme, Kodaikanal	Assistant Director (Drilling)
„ R. R. Narasimhalu,	Assistant Agricultural Engineer (Soil conservation scheme) Kodaikanal.
„ K. Muthusami, Asst. Horticulturist, (Vegetable scheme) Coimbatore	Lecturer in Horticulture, Coimbatore.
„ K. Narayanan Nayar,	Deputation for a further period of one year from 1-8-'58 under the Kerala Govt. as Principal, Extension training centre, Kottarakara.

Upper Subordinate — Postings and Transfers

Name and designation	Transferred or posted to
Sri Solomon Durai Rajan, Botany Assistant, Sugarcane Research Station, Gudiyatham	Assistant, Sugarcane Zonal Farm, Lakshmangudi.
Kumari G. Kousalya, Asst. Lecturer in Mycology, Coimbatore	Asst to Professor of Plant Pathology in the Post Graduate Training centre, Coimbatore.
Sri C. N. Venkataraman, Assistant, in Chemistry, Coimbatore	Asst. to Professor of Soil Science, Post Graduate Training centre, Coimbatore.
.. P. Madhava Menon Assistant in Millets, Coimbatore	Ass'. to Professor of Plant Breeding and Genetics, Post Graduate Training centre, Coimbatore.
.. Md. Abdul Khader, Fruit Asst. Periakulam	Asst. to Professor of Horticulture, Post Graduate Training centre, Coimbatore
.. M. S. Venkataraman, Agricultural Demonstrator under suspension	Agricultural Demonstrator, Pernambut (North Arcot District).
.. V. Seshadri,	Asst. in Chemistry, Sugarcane Research Station, Gudiyattam.
Kumari V. Pancy Cecilia,	Entomology Assistant, Coimbatore.
Sri K. G. Subramanian,	Plant Protection Assistant, Guindy.
.. R. Govindarajulu, Plant Protection Assistant, Mayurum	Agronomy Assistant, Sugarcane Research Station, Cuddalore.
.. K. Palaniappan, Agronomy Asst. Cuddalore	Agricultural Demonstrator, Pollachi.
.. S. T. Srinivasan, Farm Manager, State Seed Farm, Tirutangal	Assistant in Paddy (drought resistant scheme) Tirurkuppum.

Madras agric. J., 45 : (9) 371—375, 1958



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

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

Tirupur: Coimbatore District: Season: There were widespread rains throughout the district and the same was beneficial to the standing crops.

Arrivals and Transactions: Kapas: During the month the market started with an opening balance of 27701 pothis of Cambodia and 6720 pothis of Karunganni kapas. The total arrivals into the markets amounted to 30161 pothis of Cambodia and 6821 pothis of Karunganni kapas. The disposals during the month were 28413 pothis of Cambodia and 8515 pothis of Karunganni kapas. At the end of the month there was a closing stock of 29449 pothis of Cambodia and 5026 pothis of Karunganni kapas.

Lint: The lint market started with an opening balance of 11520 candies of Cambodia and 2288 candies of Karunganni lint. The total arrivals into the market were 8859 candies of Cambodia and 1322 candies of Karunganni lint which included 2363 candies of Cambodia and 130 candies of Karunganni locally ginned. Despatches from Tirupur accounted for 9806 candies of Cambodia and 1306 candies of Karunganni which were sent to Madras, Tanjore, Salem, and Dindigul in this State and to places in Bombay, Kerala and Andhra Pradesh States. At the end of the month there was a closing stock of 10473 candies of Cambodia and 2304 candies of Karunganni lint.

Prices: The cotton market was steady during the month. The price ranges were as follows:

	Lint (per candy of 784 lbs).	Kapas (per pothi of 280 lbs).
Cambodia superior quality	Rs. 900—981	Rs. 145—154
„ average „	Rs. 800—870	Rs. 115—130
Karunganni superior „	Rs. 860	Rs. 128

Ramanathapuram District: *Season:* Good rains were received during the month throughout the district and the same were beneficial for the standing crops.

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.

Name of market	Opening stock	Kapas in pothis of 280 lbs:			
		Receipts	Total	Disposals	Closing balance
Virudhunagar	... 1,500	12,500	14,000	13,000	1,000
Sattur	... 500	12,000	12,500	12,500	...
Rajapalayam	... 1,000	39,000	40,000	35,000	5,000
Total	... 3,000	63,500	66,500	60,500	6,000

Name of market	Opening stock	Lint in candies of 784 lbs:			
		Receipts	Total	Disposals	Closing balance
Virudhunagar	... 665	1,450	2,115	1,800	315
Sattur	... 150	1,450	1,550	1,500	50
Rajapalayam	... 230	3,200	3,430	2,700	730
Total	... 1,045	6,050	7,095	6,000	1,095

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

Kapas in pothi of 280 lbs.	
Karunganni	... Rs. 88—98
Tinny Karunganni	... Rs. 87—90
Tinny	... Rs. 67—79
Uganda 1st quality	... Rs. 125—170
„ 2nd „	... Rs. 92—130
„ 3rd „	... Rs. 67—100

Lint in candy of 784 lbs.	
Karunganni Seed Farm	... Rs. 850
Karunganni	... Rs. 696—806
Tinny Karunganni	... Rs. 650—685
Tinny	... Rs. 580—630
Uganda Certified	... Rs. 1325—1396
„ uncertified	... Rs. 1111—1280

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

South Arcot District: Arrivals of summer groundnut crop decreased during the month. The district produce amounted to 7441 tons while receipt from other districts like North Arcot and Tiruchirapalli came to 141 tons. Import from other States totalled 47 tons. Consumption by mills and chekkus came to 4130 tons and 299 tons respectively. Exports to Pondichery and despatches to other districts like Madras, Chingleput, North Arcot, Tanjore, Salem and Tiruchirapalli amounted to 38 tons and 3557 tons respectively. Wastages were calculated at 655 tons. The stock with the trade at the end of the month stood at 2098 tons.

Prices: The average prices prevailed at the several markets from Rs. 147.10 to Rs. 179.10 per candy of 531 lbs. according to quality.

North Arcot District: *Season:* The district experienced fairly widespread rains during the month, which was very beneficial to the standing crops of groundnut.

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

	Opening balance	Arrivals	Disposals	Closing balance
Groundnut kernels (candy of 531 lbs.)	... 629	1904	2397	136
Groundnut pods (Tons)	... 1593	673	296	1970

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 August 1958 as compared to July, 1958.

	August, 1958.	July, 1958.
Groundnut kernels (Cdy. of 531 lbs.)	Rs. 165—185	Rs. 140—160
Groundnut pods (Md. of 82 2/7 lb.)	Rs. 13—19	Rs. 12.50—20
Groundnut oil (Cdy. of 500 lbs.)	Rs. 328—340	Rs. 300—342
Groundnut cake (Md. of 82 2/7 lb.)	Rs. 9—11	Rs. 8.25—10

Ramanathapuram District: *Arrivals and Transactions:* The following were the receipts and disposals of pods and kernels during the month of August, 1958 in Virudhunagar market.

	Opening stock	Receipt	Disposals	Closing stock
Kernels (in cdy. of 531 lbs.)	1265	400	1665	Nil.
Groundnut pods (in tons)	250	...	250	...

Prices: The following were the range of prices that prevailed for pods, kernels and oil during the month of August, 1958 at Virudhunagar as compared to July, 1958.

	August, 1958	July, 1958.
Groundnut pods (Mds. of 82 2/7 lbs).	Rs. 18—20	Rs. 16—20
„ kernels (cdy. of 531 lbs).	Rs. 172—185	Rs. 145—180
„ oil (cdy. of 500 lbs).	Rs. 300—330	Rs. 300—325
„ oil cake (Mds. of 82 2/7 lbs).	Rs. 9.80—12.00	Rs. 9.00—11.00

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

Arrivals of gingelly seeds accounted to 1574 bags besides 250 bags received from Tiruchirapalli. Despatches to Madras, Tanjore and Pondichery came to 798 bags. Mills and chekkus consumed respectively 29 bags and 696 bags. The stock with the trade at the end of the month stood at 758 bags.

The average prices per bag of 168 lbs varied from Rs. 56.26 to 64.50 according to quality.

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 15340 candies of chewing and 380 candies of cheroot tobacco. About 5475 candies of chewing and 250 candies of cheroot tobacco were exported to South Arcot, Mathurai, Salem, Tirunelveli and North Arcot districts of Madras State and to places in Mysore, Kerala, Bombay and Andhra Pradesh States.

Prices: There was good demand for all varieties of tobacco and there was an improvement in prices also. The prices were as follows:

Prices in Rs. per candy of 500 lbs.			
Variety	I Grade	II Grade	III Grade
1. Chewing tobacco (Sun-cured):			
(a) Meenampalayam	400—450	250—325	125—225
(b) Other varieties	255—310	170—210	100—160
2. Cheroot varieties:			
Sun-cured grown in			
Erode and Bhavani Taluks	260—320	210—250	140—190
3. Chewing tobacco:			
Pit cured grown in Palladam			
and Sullur areas.	210—315	160—230	80—120

Cardamom: Arrivals and Transactions: Arrivals of Cardamom in the different market centres in Madurai centres and Virudhunagar during August, 1958 were as follows:

The estimated stock position of cardamom during August, 1958.

Name of centres.	Quantity in lbs.		
	Estimated Arrivals.	Despatches.	Closing balance.
1. Bodinaickanur	... 1,57,000	1,59,000	19,000
2. Thevaram	... 13,000	12,000	1,000
3. Pannaipuram	... 7,000	6,000	1,000
4. Kombai	... 6,000	5,000	1,000
5. Uthamapalayam	... 15,000	16,000	8,000
6. Cumbum	... 4,000	3,500	500
7. Gudalur	... 3,000	2,500	500
8. Pattiveeranpatti	... 26,000	26,000	5,000
9. Virudhunagar	... 32,000	18,000	21,000
	2,63,000	2,48,000	57,000

Prices: The maximum and minimum prices that prevailed during August, 1958 for different trade qualities were as detailed below:

Prices in Rs. per lb.

Bodinaickanoor, Thevaram etc.

(1) Green	Rs. ... 8.96 to 10.66
(2) Extra green	„ ... 9.75 to 10.47
(3) Shipment	„ ... 7.91 to 8.75
(4) Seeds	„ ... 11.75 to 12.00

Virudhunagar:

(1) Green	„ ... 9.25 to 9.75
(2) Extra green	„ ... 9.81 to 10.25
(3) Shipment	„ ... 8.50 to 8.75
(4) Seeds	„ ... 12.00

Pattiveeranpatti:

I Sundried:

(1) Superior and bold	„ ... 10.24 to 10.66
(2) Medium and bulk	„ ... 9.12 to 9.82
(3) Inferior and small	„ ... 8.70 to 8.95

II Store Green:

(1) Superior	„ ... 10.22 to 10.69
(2) Medium and bulk	„ ... 9.38 to 9.92
(3) Inferior and small	„ ... 9.00 to 9.25
(4) Seeds	„ ... 11.97
(5) Splits	„ ... 8.20 to 8.60

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

General: The Market Committees of South Arcot, North Arcot and Coimbatore continued to function 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 were as follows:

Name of the Market Committees	Section 5 (1)		Section 5 (3)		Weighmen	
	A	B	A	B	A	B
South Arcot Market Committee	219	1901	166	1370	149	1272
North Arcot Market Committee	95	1123	63	915	18	500
Coimbatore Market Committee	145	1115	117	899	25	559

A = Licences issued during the month.

B = Licences issued up to the end of this month.

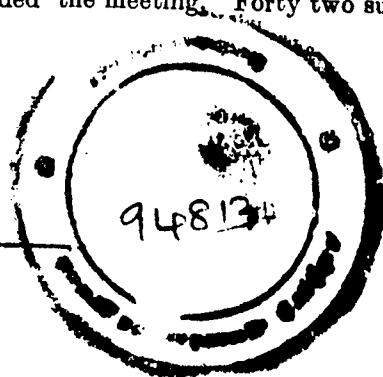
Meetings: A meeting of the Coimbatore Market Committee was held on 9—8—1958 and 12 subjects were discussed and passed. The subjects were mainly of routine administrative nature.

The fifth ordinary meeting of the Committee was held at Tiruvannamalai on 16th, which was presided over by the Chairman. A total of twenty one subjects in the agenda were disposed off at the above meeting.

A meeting of the South Arcot Market Committee was held on 11—8—1958. Nine members attended the meeting. Forty two subjects were disposed off at the meeting.

Quality Analysis: Nil.

Quality Competition: Nil.



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