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MINISTERS AT THE COLLEGE DAY AND CONFERENCE
on 19th August 1955

Left to Right: Chief Minister Madras State, Union Minister of Agriculture and State Minister of Agriculture.

— By kind courtesy of 'Nava India'.

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THE MADRAS AGRICULTURAL STUDENTS' UNION.

This is an association of the students, past and present, of the Madras Agricultural College, and of the officers of the Madras Agricultural Department, the Principal of the Agricultural College being the President, ex-officio. The Union conducts this Journal and celebrates annually the College Day, on which occasion it convenes an Agricultural Conference. The Association has Members, Associates, Honorary Members and Patrons. For detailed particulars apply to the Secretary.

THE MADRAS AGRICULTURAL JOURNAL

A Premier Agricultural Monthly in India

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The Secretary, M. A. S. Union,
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NOTICE

THE ASSOCIATION OF THE UPPER SUBORDINATE OFFICERS
OF THE
MADRAS AGRICULTURAL DEPARTMENT
AGRICULTURAL COLLEGE, LAWLEY ROAD P. O., COIMBATORE

Requests the Upper Subordinates to become its members and strengthen the Association.

Subscription for Life membership Rs. 5/- Entrance fee As. 8

Old members who are in arrears of subscription are requested to clear them off at a very early date. It is proposed to convene a General Body meeting in September 1955.

Members are requested to send resolutions and suggestions regarding our welfare.

Agricultural College,
Lawley Road Post,
Coimbatore.

S. Muthuswami,
Hony. Secretary.

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Editorial

Thirty-eighth College Day and Conference: A year of intense activity of the Madras Agricultural Students' Union, culminated with the annual celebrations on the 19th and 20th of August this year.

The College Day and Conference was inaugurated by Shri Ajit Prasad Jain, Union Minister for Food and Agriculture; Sri K. Kamaraja Nadar, Chief Minister of Madras declared open the Exhibition. Sri M. Baktavatsalam, the Madras Minister for Agriculture, Sri M. S. Sivaraman, Director of Agriculture and Sri R. Balasubramaniam, Principal of the Agricultural College delivered introductory speeches on the occasion. The address for the College Day and Conference was delivered by Dr. T. S. Sadasivan, Director, University Botany Laboratory, Madras. There was a large gathering of leading landlords, officials, students, and other non-officials. The address and all the speeches delivered during the occasion have been reproduced in this issue for the information of our readers.

The Symposium on "What next in Agricultural Research and Extension" was conducted in the immediate presence of Sri M. Baktavatsalam, the State Minister, on the 19th and Sri N. Murugesa Mudaliar, Deputy Secretary to the Government on the 20th of August with Dr. T. S. Sadasivan in the chair. Many interesting papers and discussions high lighted the symposium on both the days, in which the Headquarters Deputy Directors of Agriculture, Sri B. M. Lakshmipathi Mudaliar, Dr. K. C. Naik and Sri S. N. Venkataraman and other scientists of the Department, took an active part. The chairman, Dr. T. S. Sadasivan, in his concluding speech

brought out the following points as worthy of attention in the immediate future of Agricultural Science in the State :—

1. The need for the study of the functioning of the root systems of crop plants. Hitherto, much of the emphasis had been directed towards the study of shoot characters in plant breeding programmes. The future, he said, should be directed towards the physiological angle of the breeding to understand the advantages of a shallow or a deep or a wide root system in any programme of selection in plant breeding.

2. Transpirational economy of crop plants, he opined, had to be studied for a proper understanding of drought resistance in plants.

3. New resources of minerals as and when discovered could be secured for plant availability, thus enriching our plant nutrition.

4. He further mentioned that reaction of plants in differing climatic conditions and environment could be tried using meterological methods of measuring root and shoot temperatures with electronic thermocouple units, which are now available in the market.

5. The precursors of long and short staple cotton fibres, it was suggested, may be studied from a bio-physical and bio-chemical angle.

6. A chromosome map of crop plants in Southern India based on the data now available at the Coimbatore Institute and elsewhere, it was pointed out, has to be formulated at a very early date.

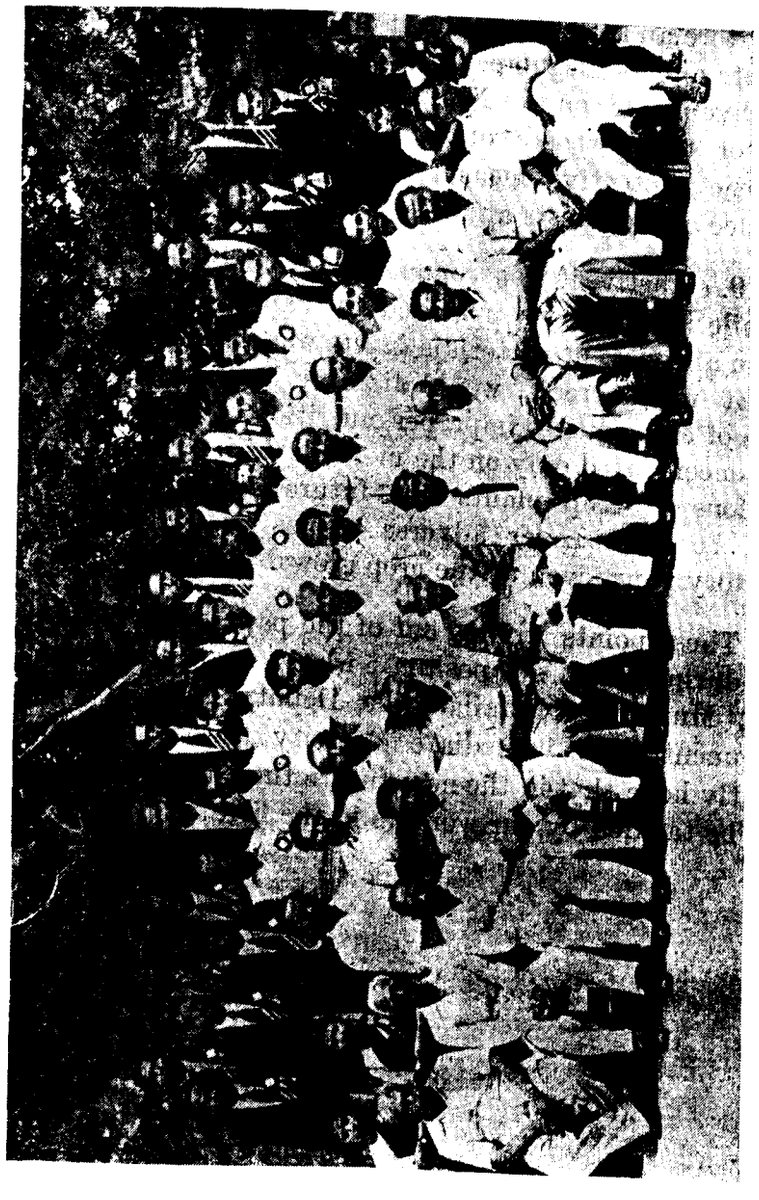
7. If plant protection programmes have to be improved, it was agreed, that it will be an urgent necessity to work on phytotoxicity with the Physiologist, the Mycologist, and the Entomologist collaborating to properly screen all properietory products from this aspect, before recommendations are made for crop plants growing under Indian conditions.

8. The study of Aerobiology, which is a modern approach to the study of air-borne flora and fanna, it was

opined, would have also to be undertaken. The Civil Aviation Department could be approached for permitting the attachment of small aerobiological instruments at Madras, Coimbatore and Cochin on the Eastern and western flanks of the State and at Begumpet, Madras, Trichinopoly, Madurai and Trivandrum on the Northern and Southern flanks of the State for the purposes of this study. This would help prophylactic protective measures to be taken in time on the incidence of crop pests and diseases.

9. Lastly, it was commended, that the establishment of mobile Laboratories operated by expert officers, who will analyse all relevent materials *in situ* was an imperative need. This, it was agreed, would discover in time the possible failure of crops due to improper nutrition. Work so far had been concentrated only on the methods of improving growing conditions of crop plants but future aim, it was stressed, should be to discover adverse causes *in situ* with mobile laboratory vans, even as the crop grows.

These points arising out of the papers and discussions held during the symposium were also endorsed by Sri N. Murugesa Mudaliar, the Deputy Secretary to the Government, as of immediate necessity to the State and we fervently hope that in the near future these aspects of studies would be tackled by our workers in the field.



MADRAS AGRICULTURAL STUDENTS' UNION

Managing Committee and Editorial Board Members, Convenors and Student Volunteers who were in charge of the College Day and Conference.

THIRTY-EIGHTH COLLEGE DAY & CONFERENCE

★

Principal's Welcome Speech

As Principal of the Agricultural College and Research Institute, Coimbatore and President of the Madras Agricultural Students' Union, it is my proud privilege and honour to welcome all those assembled here on the occasion of the thirty-eighth College Day and Conference. The Madras Agricultural Students' Union is very grateful to Hon'ble Sri Ajit Prasad Jain, Union Minister for Food and Agriculture for having consented to deliver the inaugural address and to be present here today at considerable personal inconvenience especially when the Lok Sabha is in session. We feel extremely honoured by the distinguished presence of Hon'ble Sri K. Kamaraja Nadar, our popular Chief Minister who has graciously agreed to open the Exhibition. It is his first visit to the Institution and we are all eagerly looking forward to the opportunity when each specialist will have the privilege of explaining his sectional work with the aid of charts and posters and of benefiting by the advice tendered during the discussions. Let us fervently hope this fleeting visit is only a precursor of further long visits to the research and educational wings of this institution in the near future. We are equally fortunate in securing the presence of Hon'ble Sri M. Bakthavatsalam, Minister for Agriculture, Madras for presiding over the Symposium. His untiring energy, zeal and application to problems of agriculture in the three fields of research, education and extension are well known. He has the rare gift of developing quick personal contacts, understanding the difficulties and applying himself to solve the bottlenecks. The Institution owes a great deal to his personal interest in its present development on the educational side. We can look forward to his able guidance in the conduct of the Symposium "What next in Agricultural Research and Extension Programme", which will have a profound bearing on the execution of the next Second Five Year Plan. It is indeed very kind of Dr. T. S. Sadasivan, Director of Botany Laboratory, Madras University to have accepted the invitation to address the gathering on this occasion. He is a scientist of the first rank and his contributions in the field of mycology and plant pathology have won wide recognition in the scientific world. He is not new to us since he has already delivered the Maharaja of Travancore Curzon Lectures, and the Convocation Address to Diplomates in Horticulture at this Institution. I know him well and on more than one occasion, we have discussed to our mutual advantage certain pathological problems relating to cotton and redgram while I held the post of Cotton Specialist. I am extremely happy to have the privilege of welcoming Dr. Sadasivan, a distinguished scientist whose

words of thought and wisdom will greatly help and cheer us in our deliberations today.

Agricultural education in Madras continued to attract young men in larger numbers than before. The strength of admission to the College which was raised to 108 students during last year was allowed to continue unchanged. 481 applications for admission to the B. Sc. (Ag.) degree course during this year were received. The number is very much larger than those received during the previous years. A considerable proportion of the applications was from farming communities whose desire to give their sons agricultural education at the University level must be viewed as a welcome change likely to have far reaching effects on the pattern of agricultural industry at no distant date. 88 out of 97 students who appeared for the final examination of the degree course under old regulations came out successful. All of them are expected to be absorbed in the existing vacancies of the Department. The six months practical farm training introduced in the syllabus for the final year students under the new regulations was implemented for the current batch from 1st July 1955. The 79 students have been divided into batches and attached to Central Farm, Coimbatore, Agricultural Research Stations, Koilpatti, Aduthurai, Tindivanam, Pattambi and Mangalore on a linguistic basis. Five to six members comprising a team are allotted a quarter acre block of wet or garden land for cultivation from A to Z without engaging outside manual labour of any kind. I am glad to say that the student trainees have entered into the spirit of the work and have proved themselves as efficient and as hardy as the hired professional labour. The members of the Tennessee University and the Indo-American teams of specialists who visited the Institute recently and watched the trainees at field work were extremely appreciative of the system as well as the students' zeal, output and sustained interest.

The Institute continued to attract students for post gradudate research leading to the award of M. Sc., and Ph. D. degrees. During the year 24 students registered for M. Sc., and 4 candidates for Ph. D. degree while one student was awarded the M. Sc., degree. We were compelled to reject a number of applicants for want of students facilities in certain sections.

The Post Graduate Diploma course in Horticulture had to be suspended for the year 1954–55 and revived during the current year with a sanctioned strength of 35 students. The selections have been made and the course has commenced to work from 16th August 1955.

The refresher course in agriculture for young farmers in the age group of 17 to 25 years continued to operate for the third year from 18th July 1955. The training would cover a period of full six months and impart practical instructions in agriculture and allied subjects to

sons of farmers whose scholastic attainments did not go beyond the secondary school stage. The medium of instruction was in Tamil and thirty young farmers from all over the State were selected by the four Regional Deputy Directors of Agriculture and sent to Coimbatore for training under a special Agricultural instructor at the Central Farm. All the previous trainees have gone back to the village and are cultivating their own lands. I wish these young farmers who have returned to their places with added faith, experience and knowledge, a happy future and a long life of continued usefulness to their brother farmers in the neighbourhood.

A notable feature of the year was the arrangement made by the Government in giving short training at private farms to the B Sc., (Ag.) students who had completed the course and were awaiting the results of their examinations. Most of the Boys took advantage of the offer and spent about a week with selected farmers owning extensive areas and willing to provide free boarding and lodging to student guests. It is hoped that this arrangement will be placed on a permanent footing and the students will have the opportunities to watch and to take lessons from the organisation and management of private farms at close quarters. Let me thank the host Farmers for their gesture and warm welcome extended to the trainees allotted to their care for a brief period.

A new Central Exhibition portraying the problems, the progress of research and the remedies pertaining to agriculture of the State has been organised. Although it is still in the infant stage, it is hoped that in the years to come, it will become a centre of attraction and dissemination of scientific knowledge to the farming population in general. A well equipped adjunct of this type to the Agricultural College and Research Institute will add to the usefulness of research, education and extension wings of the department.

On account of the six months practical farm training instituted for the final year students of revised regulations at five other muffasil Agricultural Research Stations from 1st July 1955, bulk of the students have not been able to participate in the College Day Celebrations and to benefit by the speeches, discussions and displays arranged during the symposium, farmers' day and Central Exhibition. We miss them and their contributions. Let me congratulate the various prize winners of the year and exhort them to display the same zeal and application to the duties and responsibilities allotted to them while in service under the Department. The edition of "Tatler" brought out by the students is in line with the previous traditions of the College. It is an achievement worthy of emulation by the future batches.

The Madras Agricultural Journal continued to convey new messages and ideas to the agriculturists and literate public, largely due to the

sustained spirit of service and liberal donations from the members. It is time that early steps are taken to place the journal on a sound financial footing and to remove all uncertainties about its future.

I once again take this opportunity to extend a very cordial welcome to members of the Public, to student farmers and to officers of all departments assembled here.

Report of the Secretary of the M. A. S. Union

I have great pleasure in presenting to you on behalf of the Madras Agricultural Students' Union, the report for the year 1954—'55.

It is indeed, fortunate that we are having amidst us today Hon'ble Sri A. P. Jain, Union Minister for Food and Agriculture to inaugurate the proceedings of this Conference. I take this opportunity to express the deep sense of gratitude of the Union to Hon'ble Sri Jain for having graciously accepted our invitation, in spite of the multifarious duties that devolve on the responsible position he occupies. 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 recognition by the Government, as evinced by your gracious consent to lead us in our deliberations. Your presence here, today 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. Hon'ble Sri Jain will always be remembered as a worthy son of the Nation, a patriot of the front rank, who has sacrificed much in the cause of freedom. He has been closely connected with the abolition of the Zamindari and is now at the helm of affairs in the agricultural development of the Indian Union. The example of Hon'ble Sri Jain in the National cause will always be a reminder to us to forge ahead with our endeavours in the fulfilment of the country's developmental plans and his mature experience can guide us to follow the right path.

It is also our proud privilege to welcome to our midst, our popular Chief Minister, Hon'ble Sri K. Kamaraja Nadar. His sincere interest in the welfare of the tiller of the soil and the common man and his simple and direct methods of solution of the difficult problems that confront our State have endeared him to all classes of people, high and low. This is the first occasion when we are having the honour of his gracious presence in our midst. We are grateful to him for consenting to open the Central Exhibition.

Hon'ble Sri M. Bakthavathsalam, Minister for Agriculture has honoured us by consenting to preside over the Symposium. We owe a debt of gratitude to him for his interest in the activities of the Union.

Hon'ble Sri M. Bakthavathsalam is no stranger to us, as we have had the privilege of his experience in guiding the destinies of our department for the past two years. It is needless to stress the remarkable efficiency with which he guides the activities of the Agricultural Department in the State. We are sure that in his address we would find a rich mine of practical counsel to help us in discharging our duties.

Professor T. Sadasivan, Director, University Botany Laboratories, Madras University, is no stranger to this gathering. He is a scientific worker of international repute. He has represented our country already twice in International science gatherings. He is amongst the foremost workers in the field of Mycology, has trained a number of post graduate students and has gathered round him a group of enthusiastic workers. It is an honour to the Madras Agricultural Students' Union, that he has consented to deliver the presidential address today. We extend him a hearty welcome.

The Madras Agricultural Students' Union: It was in the year 1911 that this Union was founded by a few enthusiastic workers to bring together the associates and students of the Agricultural College, Coimbatore and its predecessor the Saidapet College of Agriculture. The Union has been functioning as an independent voluntary organisation and in those early years served mainly as a link between the students past and present of the Agricultural College in the State. With the widening of interests, it ceased to be a mere students' organisation and has come to be the premier agricultural organisation in the State. It has now in its fold most of the officers of the Department, progressive agriculturists, and students of the College. The Union can claim with legitimate pride to be an organisation which brings into contact both extension and research workers, and the practical agriculturists for exchange of views, dissemination of knowledge, and co-ordination of planning through the medium of its journal and these Annual Conferences.

The Madras Agricultural Journal: The Journal has now come to function as one of the important media for the co-ordination of the results of research and the disemination of knowledge in the development of Agriculture. It is gratifying to record that the popularity of the Journal has been increasing as evinced by numerous contributions from research workers all over India as well as those interested in general agriculture and the articles in the Journal being abstracted in the leading Abstract Journals of the World, like Biological Abstracts, Chemical Abstracts etc. Besides the members of the Union, the subscribers to the Journal include a good many institutions and agricultural research workers in and outside India. In addition, it has on its exchange list a large number of periodicals; both Indian and Foreign.

Market Committees Chronicle: Supplement to the Madras Agricultural Journal: We are proud to place on record that the journal has commenced the publication of a special supplement, the Market Committees Chronicle, which is devoted to the factual record of the activities of Market Committees, in the regulation of agricultural markets, to serve the interests of producers and consumers of agricultural commodities. In spite of the limitation in finance which still continues to be a difficult problem, the Journal has been published regularly every month. We acknowledge with gratitude in this context, the kind help rendered by the State Marketing Officer in the publication of the Market Committees Chronicle.

Finance: Limitations in the financial resources have been the greatest impediment in the expansion of the activities of the Union. The publication of the Madras Agricultural Journal is the chief activity of the Union and even with its modest format, the expenditure under this head continues to be a matter of grave concern and is not commensurate with the income by way of subscriptions. The Indian Council of Agricultural Research was approached for financial aid but it is a matter for regret we were not able to secure the Council's help. State support in the form of a special annual grant of Rs. 1,800/- has been forthcoming since 1947—'48 and for this aid the Union desires to place on record its extreme gratitude to the Government of Madras. To the seven Market Committees in the State who jointly contribute a sum of Rs. 440/- towards the publication of the Market Committees Chronicle our thanks are also due.

We fervently hope that every Research worker in India and every agriculturist in the State will join this organisation as a member and strengthen it, so that it may flourish and play its part creditably in the service of the Nation. We appeal to one and all of our members to help others to join our fold.

The College Day and Conference, 1954: The celebration of the annual College Day and conference is one of the important activities of the Union. The 37th College Day and Conference was celebrated last year from the 18th to 21st August 1954. The conference was inaugurated by Hon'ble Sri M. Bakthavathsalam, Minister for Agriculture, Madras State. Sri N. L. Dutt, Director, Central Sugarcane Breeding Institute, Coimbatore delivered the address and the subsequent sessions were presided over by him.

A symposium on "Recent advances in Agriculture" was organised which aroused considerable interest and a keen discussion in which a number of non-officials as well as departmental officers participated. An account of the proceedings of this Conference has already appeared in the August issue of the Madras Agricultural Journal, 1954.

Meetings under the auspices of the Union: Dr. S. C. Harland F. R. S. Professor of Botany, Manchester University, one of the foremost Geneticists of the world to-day addressed the Officers of the department and the students of the Agricultural College, Coimbatore on the "Impact of Genetics on Plant Breeding".

Ramasastrulu Munagala Prize: The Ramasastrulu Munagala Prize has been awarded for the year 1955 to Sri V. Santhanam, Assistant Cotton Specialist, Agricultural College and Research Institute, Coimbatore for the paper "Studies on the inheritance of some anthocyanin and corolla colour characteristics in Asiatic Cotton" which was adjudged the best by a panel of three judges. Our thanks are due to Dr. S. Krishnamoorthy, Head of the Department of the Agriculture, Annamalai University, Sri T. R. Narayanan, Plant Physiologist and Sri T. Natarajan, Administrative Officer for their kindness in acting as judges for this year's competition.

Patrons: We are extremely happy to report that three gentlemen have become patrons of the Union during the year and the Union has great pleasure in welcoming Sri M. Subba Reddy of Mango Range, Nilgiris, an old student of this College, Sri M. R. Balakrishnan, Retired Agricultural Chemist and present Agricultural Officer, F. A. O., Bangkok and Sri Raja Iyengar, land lord and a leading agriculturist of Madurai, as our new patrons.

Retirements: During the year under report the following members of the Union retired from active Government service. They are Sri M. Kanthiraj, Sri G. V. Narayana, Sri C. S. Krishnaswamy, Sri C. Rajasekhara Mudaliar, Sri S. M. Kalyanaraman, Sri A. Kunhikoran Nambiar, Sri T. S. Ramakrishnan, Sri K. Ramaswamy, Sri K. S. Krishnamoorthy, Sri P. K. Natesa Iyer, Sri S. V. Doraiswamy, Sri M. Sanyasiraju, Sri C. V. Sankaranarayanan and Sri S. S. Kachapeswaran. We wish to place on record our sincere appreciation for the services rendered by Sri G. V. Narayana, Sri C. S. Krishnaswamy, Sri C. Rajasekhara Mudaliar, Sri S. M. Kalyanaraman and Sri S. V. Doraiswamy to the Union as its functionaries. Sri M. Kanthiraj has done a great deal to strengthen the Union, for which we are ever grateful. The others are members of long standing and have helped the Union in various ways for which our thanks are due to them. We wish them all a very happy, peaceful and long life after retirement.

Obituary: We record with deep regret the demise of the following gentlemen who were associated with the Union for a long time. The late Sri Madhava Rajah of Kollengode was a patron of the Union from the early days and evinced keen interest in the activities of the Union. The late Sri C. Tadulinga Mudaliar had been asssociated with the Union from its very early days, as a functionary in various capacities and he retired

from service as the Principal of this College. Late Sri T. V. Rangaswami was a member of the Union for a long time and was one of the foremost research workers in our Department. Late Sri M. P. Kunhikutty was also a long-standing member, who was actively connected with problems of Agricultural Marketing.

Acknowledgements: Now, it is my pleasant duty to express on behalf of the Union, our thanks to all those who have helped the Union in different capacities during the year. We are extremely grateful to Hon'ble Sri M. Bhakthavathsalam for inaugurating the Conference last year. To Sri N. L. Dutt, who delivered the address and presided over the symposium, we tender our heartfelt thanks. To Sri M. S. Sivaraman, Director of Agriculture, Madras, the Committee is grateful for his kind help and guidance in all matters and very kindly distributing the prizes of the sports event last year. To Sri R. Balasubramaniam Principal, Agricultural College and Research Institute, the Union expresses its heartfelt thanks for his valuable help and guidance in making the College Day and Conference of the last year a grand success and for his sincere and sustained interest in all its activities during this year. Our thanks are also due to all the ladies and gentlemen who helped in various ways for the successful conduct of the College Day and Conference in 1954 and during this year.

Speech delivered by Sri M. Bhaktavatsalam, Minister for Food and Agriculture on 19—8—1955 requesting Shri Ajit Prasad Jain, Union Minister for Food and Agriculture to inaugurate the 38th Agricultural College Day and Conference

We are happy to have in our midst today, our distinguished visitor, Sri Ajit Prasad Jain, Union Minister for Agriculture. I must thank him for having so readily accepted my invitation to inaugurate this year's Agricultural College Day and Conference.

We are met here at a time when the country's Second Five Year Plan is taking shape. It is gratifying that under the inspiring leadership of our distinguished visitor and his able colleague, Dr. Punjabrao Deshmukh, the Food and Agriculture Ministry of the Government of India has been taking all steps necessary to see that the Agricultural sector occupies its rightful place in the Plan.

We have accepted in almost all cases the targets of increased agricultural production fixed for this State by the Central Government. These targets are: an increased production of 7·14 lakhs tons of foodgrains, out of which 1·14 lakhs tons are to be obtained by new schemes of irrigation sources and the balance of 6 lakhs

tons are to be obtained by the intensification of various agricultural schemes which are now being implemented such as the use of improved seeds and chemical fertilisers, popularising green manures and compost, reclamation and conservation of lands, control of pests and diseases, etc. and an increased production of 10 lakhs tons of sugarcane, 60,000 tons of sugar, 1,05,000 bales of cotton and 1,40,000 tons of oilseeds. Three hundred tube wells and 3,000 point wells will be sunk during the Plan period and over 2 lakhs seedlings of coconuts and 5 lakhs plants of fruit trees, etc., will be distributed by the end of the Plan period. There are schemes for stepping up appreciably the production of the dollar crops, namely cashew, pepper and areca. Soil conservation schemes will cover nearly 90,000 acres.

Altogether we have included 40 schemes under the head "Agriculture" in our State Plan, the total net cost of which is about Rs. 19 crores. Two schemes to which I draw particular attention on this occasion are: the scheme for strengthening this College and the scheme for upgrading the Research Institute attached to it. I trust that all our schemes will find a place in the final plan and that the Central Government will give us the required financial assistance to enable us to implement them.

We had a Symposium every year during our annual conference on a subject of topical interest. This year the subject "What next in Agricultural Research and Extension" has been chosen very appropriately. The answer to this question is obvious. Agricultural Research and Extension should be geared so as to enable the State to achieve the targets fixed for it in the Second Five Year Plan. However, this is more easily said than done and I trust that the Symposium which will be held to-day will throw practical and useful suggestions for realising this desired end.

Some recent reports relating to the three-year programme of Agricultural Research in this State which I saw recently revealed that while very good work has been accomplished in some fields there was much that was found to be wanting in other directions. I have no doubt that energetic steps will be taken by this Department to level up the work in those deficient fields. The volume and pace of research must be augmented and quickened and set problems should be completed within reasonable time. Research must be purposive, genuine and not repetitive. I realise that research is a slow process but stagnant and inconsequential research is a waste

of time, labour and money. I hope that the research Institute will continue to maintain in the future its fine record of work in the past.

More than research, it is by strengthening our Extension Services that we can ensure the achievement of our targets in the Second Five Year Plan. It is only by a proper organisation of demonstration and propaganda that spectacular results can be achieved as has been revealed by the success all over the country of the improved method of cultivation popularly known as the "Japanese Method". Our State is not lagging behind the other States in the country in Extension work. But, we cannot afford to be complacent in this matter as more work still remains to be done. The ideal I have set before the State Agricultural Department of organising one demonstration plot in each village is yet to be realised and until that is done, we cannot claim to have taken extension to the door-step of the farmer.

The extension work cannot be a success unless there is a two-way traffic a flow of information based on the results of research from the Research Centres to the farmers and a flow in the reverse direction of the needs, suggestions, difficulties and doubts of the farmers to the Research Centres. It is this latter process which is very much wanting and which should be stimulated and developed, and it cannot be done without the constant attention to and intimate contact with the farmers and their problems.

In no country does Extension work seem to have been developed and organized so well as in the U. S. A. It is, therefore, a matter for satisfaction that the Government of India have taken steps under the Indo-American Technical Co-operation Programme to get down experts from that Country who can give us advice in the matter of adopting in our country the features of the American Extension system which are suited to us and can be successfully fitted into our agricultural economy. I met the members of the Tennessee State University Survey Team recently and I had a useful discussion the other day with the American Members of the Joint-Indo-American Agricultural Research and Education Team. I hope that the labours of this joint team will be of practical benefit to teaching, research and extension.

More than anything else, the success of agriculture in the country which has been aptly described as a "Gamble in rains; depends on timely and adequate rains. The seasonal conditions have been fair this year so far and I hope that we would be blessed with favourable seasonal conditions in the coming year also. This

reminds me of the artificial rain-making experiments on which the Madras Government have embarked. We have sent up a scheme to the Government of India and have requested them to give a grant equal to the entire cost as the results of the experiments will be useful not merely to this State but to the country as a whole. In our anxiety not to wait till the Central Government's grant is received, we have sanctioned the scheme on a restricted scale in anticipation of the sanction of the grant.

From the question of seasonal conditions let me turn to the equally important question of stabilising the prices of Agricultural produce. There can be no better incentive to the farmer to go all out and produce all he can to achieve the tragets of agricultural production fixed in the Second Five Year Plan than assuring him a reasonable return for his efforts. The Government of India must be congratulated on the success that has attend so far their efforts to stabilise agricultural prices in the country. But, a durable solution must be found for this recurring problem by undertaking continuous study of production, markets and prices and the speedy implementation of the recommendations contained in the All India Rural Credit Survey. In this connection I must draw attention to the need for placing more emphasis on agricultural economics in our Agricultural Colleges and providing special facilities for study and research. The economic side of Agriculture is very important. Even if the Universities do not devote special attention to it, professional agricultural colleges cannot afford to ignore it. The scientific, technological and economic aspects of Agriculture should be equally developed to make it a prosperous industry. In the technological aspect I include the engineering side which in this country has not yet fully developed and its pace is still slow and halting owing to various reasons. There is need to reduce the cost of production in Agriculture by the adoption of labour saving appliances at various stages and with a greater availability of electrical energy, Agriculture should be revolutionised.

I trust that this College and Research Institute will play its due part in the development of agriculture in this State and will symbolise the spirit of progress. May you students and officers gathered here, be inspired by the words that you will hear from our distinguished guest to greater efforts and nobler achievements.

I have now very great pleasure in requesting Sri Ajit Prasad Jain to inaugurate this College Day and Conference.

Speech of Shri Ajit Prasad Jain, Union Minister for Food and Agriculture, Government of India, inaugurating the Agricultural College Day and Conference at Coimbatore on 19—8—1955

I am thankful to you for having invited me to inaugurate your Thirty-eighth College Day and Conference. Your Union is one of long standing and the Annual day when the old and new students meet together to exchange opinions and experiences has a special significance for your College. It is indeed a great pleasure for me to share your happiness.

Your College is perhaps the oldest Agricultural Institution in the country established as early as 1876 as an adjunct to the Experimental Farm at Saidapet and as a School of Agriculture. It acquired the status of a College in 1878. As early as 1920, the College was affiliated to the University of Madras for B. Sc. Degree in Agriculture and by 1934—'35, it had gained in importance enough to earn recognition for M. Sc. and Ph. D. Degree courses. Thus the College has been one of the pioneer institutions of its type in the country and has rendered valuable services to the cause of agricultural improvement in the State of Madras in particular and the whole of India in general.

Under the patronage of my friend, Shri Kamaraj Nadar, your Chief Minister and a leader of men and the more immediate care of Shri Bhaktavatsalam, your Minister for Agriculture, the Institution has not only expanded in size but has shown an all-round improvement. Both the number of admissions and of students seeking admissions to the College has increased manifold. This is a sign of the growing interest of our young men in the agricultural development. It is gratifying for me to know from the address of your Principal that the bulk of the students of this College are from farming families who are either absorbed in services or take to agriculture on their own account. The need for agricultural personnel is fast growing. Whatever success we have attained under the First Five Year Plan is largely due to a band of devoted workers and under the expanded programme of the Second Five Year Plan, we will need a larger number of Agronomists, Agriculturists and Animal Husbandry Men. I am fully conscious of the need for the qualified personnel and my Ministry has already worked out fairly large-scale schemes for the training of qualified and competent men. I am confident that your College will play an important role in our future developmental programmes in agriculture.

It is gratifying that the students of this College have on the whole made full use of the facilities provided for agricultural training in the syllabus during the final year under the new regulations has been a step in the right direction. Under this scheme, I understand that 5 to 6 students comprising a team are allotted a quarter acre block of wet or garden land for doing agricultural operations without engaging outside manual labour of any kind. This scheme of yours is comparable with a similar scheme that has been worked out in the Uttar Pradesh. Under the Uttar Pradesh Scheme, a student is allotted about 1/20th acre plot for raising crops with his own hands. He is thus not only acquainted with the practical working in agriculture, but during the whole period of his stay at College for three years, he has to do the manual work which inculcates in him the dignity of labour which is unfortunately so much lacking in our educated young men. Produce of the plot after deducting the price of seeds and manure supplied, is given to the student to enable him to earn while he learns. Also some marks are allotted for the work done on the individual plot. What you are doing here and what has been done in the Uttar Pradesh bears comparison and I hope either of the States will benefit from the results achieved by the other.

It is also a good idea that the student should after finishing the course undergo practical training on private farms. I am, however, doubtful if the period of one week is enough for the purpose. It is a matter which deserves consideration whether the students should not be initiated into the all-round activities on the farm so that they may familiarize themselves with the various aspects of the agricultural operations and in the various seasons. This opportunity of stay on the farm may also be utilized for making full acquaintance with the life of the village and of the agricultural practices followed by the small farmer. I have no doubt that with the sound backing of theoretical knowledge and laboratory work, students will be in a position to benefit themselves more effectively by intimate association with the actual practices and living agricultural work.

I attach great importance to the extension work. Fundamental science has its own place in our educational curriculum but it loses much of its utility if it remains confiined to the cloistered walls of our educational institution. It is my firm belief that the educational institutions should serve as radiators of light and knowledge round-about so that the teeming millions engaged in

practical operations may have the opportunity to benefit. Government of India is anxious to re-orientate the system of research and education with a view to bring it in closer and living touch with the agriculturists. With that object in view a team of Indian experts in collaboration with experts from the United States have gone round to study the system of agricultural research education and extension prevailing in the United States. That team is now studying our system of agricultural research education and extension. I am eagerly awaiting the recommendations of the team and I do hope that their report will help us in moulding our system in a manner which may yield practical results.

I am glad to know that you have instituted Refresher Courses in agriculture for young farmers. It is a useful activity. Knowledge of improved and modern methods in agriculture thus acquired will spread through them to their neighbours much quicker and better than through any official agency. I understand this training will be mainly practical and will be given to selected farmers and who are receptive and have the will to learn work. My Ministry has decided to issue instructions to the various Central Institutes and the Commodity Committees as well as States Institutions of agricultural research and education all over the country asking them to hold the Farmers' Day during which 'Progressive and Go Ahead' farmers will assemble at these institutions and learn the various researches that are being conducted, the results available for application and the advantages that acrue from application of modern methods and science. Your College has already anticipated what we propose to do and I am looking forward to the Central and the States' Institutes and Colleges to serve as a source of light, knowledge and inspiration to our cultivators.

In this connection, I have learnt with interest the story of gradual evolution of your Journal from a Year Book in 1911 to a monthly. There can be no two opinions in regard to its utility as a medium for the dissemination of useful agricultural information. With adequate financial assistance, I am sure it will grow in stature and utility. In view, however, of the low literacy among our people, particularly, in the rural area, I think that the Audio-Visual methods of propagation will prove more effective. In the Second Five Year Plan, we hope to develope Audio-Visual Methods intensively.

Before I conclude, I would like you to remember the memorable words of our Prime Minister. He said, "All over India there are

new centres of human activity that are like lamps shreading their light more and more into the surrounding darkness. This light must grow until it covers the land". India is on the March. We have acquired some experience and confidence on account of the success achieved under the Five Year Plan. Our Second Five Year Plan is going to be a bolder one. There are sceptics who are doubtful about our capacity to raise finances and achieve the targets of the Second Five Year Plan. I have, however, no doubt that the country is determined to make big achievements and I am sure during the next Five Year Plan period, we shall achieve the twin object of increasing our national income by 25 per cent and of creating new employment for one crore of our countrymen. Although in the Second Five Year Plan, there is comparatively more emphasis on heavy industries, yet the allocation for agriculture is going to be much more than what was provided under the First Five Year Plan. Agriculture in India will play a dominant role for a long time to come and any plan or scheme which overlooks the interest of the agricultural sector would be unrealistic in the present context of things. The Second Five Year Plan, however, has given full attention to the manifold aspects of the agricultural development and while there are bigger allocations for schemes under research, minor irrigation work, grow more food, animal husbandry, much heavier allocations have been made in certain new directions like forestry, soil conservation etc.

Ours is a people's plan conceived and worked from below. It depends for its success on the co-operation and the enthusiasm of the people. Fortunately, the mind of the common man is sound. He has the will to go ahead and achieve results. This is the greatest assurance for the success of our Second Five Year Plan. In this great enterprize, you, who have chosen agriculture as your avocation to learn the advances of modern science and their application to the field of cultivation, have a vital role to play. I am hopeful that you will be able to acquaint our farmers with methods by practising which our great heritage, the good earth of this ancient country of sure, may produce more and more for its people.

I wish a happy future to your Union. Let its activities increase and develop. It may not only bring the old and new students together but help in the creation of a bigger family made up of research workers, professors, students and practical farmers inspired with the spirit of mutual help and co-operation.

THE ROLE OF UNIVERSITIES IN THE SPHERE OF FUTURE AGRICULTURAL RESEARCH IN INDIA

College Day and Conference Address by the Chiarman
Dr. T. S Sadasivan, M. Sc., Ph. D., D. Sc. (Lond.), F. N. I., F. A. Sc.,
Director, University Botany Laboratory, Madras

It gives me immense pleasure in being here to-day and I am deeply grateful for the invitation. My agricultural qualifications entitling me to be here to-day are inconsiderable, as my association with the subject was for about six years as a postgraduate research worker in the premier agricultural institution of the United Kingdom, The Rothamsted Experimental Station and later as Microbiologist at the Punjab Agricultural College, Lyallpur, in undivided India. I am, therefore, not here as one with any great deal of agricultural research experience. I am a University man and since botany is basic to agriculture, I presume I can consider mysely reasonably qualified to indicate the role that we in the Universities, can and ought to assume in the future agricultural development of our country. There is, I think, an urgent necessity of distinguishing between major approaches to problems of agricultural importance. There are, inevitably, both long-range and short-range problems and the Universities can undertake to work on the former and should be encouraged to concentrate on them. At the same time, it is necessary to emphasise that long-range problems do not necessarily indicate purely academic pursuits of fundamental knowledge and, indeed, many applied problems could fall in either category and the Agricultural Departments can undertake such of those for which they are best equipped and pass on the others to Uuiversity centres of research. For example, the modern work on tissue culture sounds to most people as too 'highbrow' a line of research, but I can well relieve that nothing can be farther from the truth than to style it as purely academic. Who amongst us has not heard of plant hormones? No country can profess to make any spectacular progress in the field of hormones unless they have scientists not only for synthesising hormones but also working on tissue and embryo culture as this is the best known physiological approach for evaluating these useful substances. I am citing this as an example of human ingenuity in trying to imitate nature by cultivating tissues in the laboratory. In fact, techniques for culturing single cells in the laboratory are not for off in this horizon. I can multiply examples but would limit myself to mentioning a most publicised topical subject – the use of radioactive isotopes in

the biological field. Who can predict the course of human destiny and much less that of the plant when in the grip of these powerful sources of energy unleashed by contemporary science?

I am afraid I have somewhat digressed from the main objecitve I have had in view. But it seemed necessary to indicate the somewhat ill-defined role of Universities in India from the point of view of their research programmes. I have often heard it said that unlike in the Universities the Departments of Agriculture want quick answers to their research problems. I have not been fully able to appreciate this, for, with my limited experience in the biological fields of research, I am inclined to feel that the insistence on this definition of a working programme will not only bar progress but would inevitably lead to a stalemate in research activities. Whilst admitting that research for research sake should not be the sole aim and outlook, it is necessary to concede that any strictly defined programme of research would again hamper progress. We, in the Universities, believe in considerable plasticity in drawing up programmes of research largely because in these days of specialization, it is not infrequently that a researcher feels the need to digress and draw inspiration from border line subjects with which he is not essentially connected and, therefore, in such eventuality he should find himself unfettered. Here, clearly, is an ideological complex where, on the one hand, we have a pattern which allows little latitude in a programme of research and another which, without any rigid proviso, delimits in a way the major line of research but allows of reasonable latitude, I, for one, would commend the latter to the administrator for serious consideration. Admittedly, almost all great discoveries have merged out of free thinking and rigid experimentation. It may sound unorthodox to adopt this pattern straightaway but I make a plea to give it a fair trial and and I am convinced it would change the outlook for the better.

The question foremost in my mind is how Universities can help in building up this integration. In the main they can impart intensive training to Agricultural personnel in basic and semi-applied sciences, particularly in precision techniques. Within the last two decades I have seen a progressive and healthy drift in researches in Indian Universities in tackling border line subjects where the fundamental knowledge they have traditionally acquired has been fitted into applied fields of enquiry. The time is, therefore, ripe in pushing through this training scheme. But before doing so, it would be necessary to finance these projects by establishing suitable

fellowship and financial assistance to cover the cost of special apparatus etc., needed by the fellow during the course of his investigations. This would result in the emergence of a generation of efficient teachers in Agriculture with research experience in fundamental sciences and they would, therefore, be able to embark on their teaching cum research programmes with enthusiasm, efficiency and gusto. It may be necessary, however, to emphasise that such highly trained personnel should solely be employed in posts for which they are eminently suited temperamentally and intellectually and we should cry a halt to "drifts" in science by effectively debarring this category of workers from taking administrative posts. Nevertheless, this brings in its trail the basic question of applying socialistic pattern of employment in service conditions by equating administrative posts with the technical teaching cum research posts. It is probably difficult to agree with the oft quoted views of the late Mr. Bernard Shaw that " those who can, do, and those who can't, teach ". I believe it is an anachronism and I would, as a teacher, prefer to put it the other way round and say that " those who can, teach ".

It may be worthwhile exploring the possibility of establishing Liaison Officers who will be responsible for co-ordination between Universities and the Departments of Agriculture as this new outlook presupposes free exchange of results between the two. It also becomes incumbent on all those concerned to publish all complete works in recognised national and international Science journals instead of only in memoirs of the Departments of Agriculture of the various States. Governmental subsidy for Science journals of an All-India character and to University Science journals of standing should be stepped up to enable them to publish research manuscripts of mutual interest from the Departments of Agriculture. This would fill a lacuna that has existed for many years and all this would, in my opinion, lead to greater co-ordination between the Universities and the Agricultural Departments.

I have often wondered why in India, unlike in foreign countries, specialists in University centres are not freely consulted by their counter-parts in the Departments of Agriculture and, of course, *vice-versa*. In my view, these watertight compartments, should not be allowed to continue. To some extent the situation could be caused by having panels of scientific consultative committees with specialists from Universities who can also act as reviewing committees of research projects and the working of various sections of the Departments of Agriculture in collaboration with Agricultural

experts. These committees can periodically meet and lend a hand in indicating newer and more fruitful lines of research as they see it. We have to make a beginning somewhere, and I would commend trying this procedure and if such committees objectively view scientific projects without clouding the issues with persons and personalities, we would be harnessing ripe experience and talent in a joint enterprise of the fundamental and applied scientists.

Comparing with our own the lay-out of Agricultural investigations in the West and the liaison they have with their Universities, I cannot refrain from bringing home some of the laudable collaborative work they do. For instance, pilot plant investigations are largely undertaken by the Universities and the results passed on to the Agricultural Research Institutions. Designs of new machinery are usually undertaken as a joint enterprise and what is most fascinating is the extreme delicacy with which precision experimental techniques are evolved from almost rudimentary or even obscure ideas given by individual farmers and growers. There is a moral in every one of those enterprises which will richly benefit us in the advancing scientific consciousness now happily felt throughout our land.

I will finally mention a few words about the Agricultural University at Wageningen in Holland. To my mind the Dutch system of organising Universities for each applied science and basic sciences and the humanities can be studied further. I am somewhat inclined to feel that the formation of an Agricultural University with both graduate and post-graduate teaching and research in all its aspects as in Wageningen would be a matter for serious consideration. In such a University there could be established a system of visiting Professors from the existing Universities for specialised lectures and demonstrations in pure science subjects that have a direct or indirect bearing on Agricultural problems. For instance; bold and imaginative breeding programmes in intergeneric hybridisation, effects of radiations on biological systems, fundamental and applied work on the dynamics of the living plant and many problems of a vital character to a growing Agricultural country could be tackled most vigorously.

I realise I have indulged in some free thinking. Even in Science we have to finesse as much as in a game of cards and if I have placed before you any points of interest worthy of serious thought, I shall return to my laboratory at Madras mightily pleased in having had this honour and opportunity of addressing such a distinguished gathering. Thank you.

Opening of the Exhibition by the Chief Minister, Madras

Introductory Speech of M. S. Sivaraman, I.C.S., Director of Agriculture, Madras

One of the outstanding events of this year in the history of this Agricultural Research Institute has been the separation of the administrative functions from Research Officers in order to enable them to devote whole-hearted attention to scientific and technical matters. This has resulted in centralising the administrative offices in another building; the space released thereby has been pooled together to form the nucleus of a permanent Central Exhibition in which the activities of the Institute are depicted to layman as well as the scientist.

We are acutely conscious of our shortcomings, during a transitional time when Scientists brought up in an atmosphere of English have to make themselves equally intelligible in the vernacular. Some of the posters in the Exhibition may be in English but soon there will be side by side a vernacular rendering which will make the exhibition useful to the average cultivator of the State.

There has been of late a growing tendency to regard agriculture as a very simple subject and an easy profession — a matter of mere sowing of seeds followed by an inevitable harvest, with a few Do's and Don'ts thrown in, in a regimented fashion to ensure success. I hope this exhibition will help to dispel that idea and show that agriculture is at once a very complex and complicated science and art, dealing with a host of factors about which our knowledge vast as it is, is still imperfect. I hope this exhibition will demonstrate that success in agriculture as a profession as in most other walks of life can be obtained only by those who make a serious and whole-hearted attempt to overcome the obstacles in the way. In due course we hope to display in a manner understood by the common ryot the major difficulties they have to face and indicate how our scientific workers are trying to overcome these and with what measure of success.

We are Indeed glad that the inauguration of this exhibition is done in the presence of our Union Minister for Food and Agrirulture and it is now my proud privilege to request our Chief Minister to inaugurate the Central Agricultural Exhibition of the Institute.

Abstract of the Speech by Sri K. Kamaraj Nadar, Chief Minister of Madras, when declaring the Exhibition Open

Recently an impetus had been given for the adoption of new, improved methods in agriculture in the country to increase the output. The benefit had been shared both by the consumer and the ryot.

Considerable research had been done by the Agricultural Department in the matter of evolving new strains and seeds, application of proper manure and combating pests and diseases. An exhibition of this kind would serve to acquaint the public and the ryots with the results of research in all these directions. Our small agriculturists in particular were conservative in taking to new methods and looked askance at them. They would not change unless they were convinced about the utility and efficacy of the new practices. Therefore, to inspire confidence in them was the major problem of research workers and executive officers. An exhibition of this kind would serve as an ocular demonstration of the fruits of research to agriculturists and laymen. If exhibitions of this kind were organised at places where fairs and festivals were held and where people, especially rural folk, congregated, the benefits would be still greater. Besides, it would save poor ryots from the labour and expense of going to the cities and towns like Coimbatore leaving their occupations to witness exhibitions of this kind.

Symposium on "What Next in Agriculture" List of Papers Received

[N. B. It is proposed to present selected papers as a special symposium number soon]

	Subject	Name
1.	*What next in Agricultural Research.	Dr. K. C. Naik.
2.	*What next in Agricultural Extension.	Sri S. N. Venkataraman.
3.	What next in Agricultural Research with special reference to the breeding method in castor bean production in the Madras State.	Sri K. Thandavarayan.
4.	*What next in rice breeding.	Sri K. Ramaswami.
5.	What next in Agricultural Research with reference to groundnut cultivation.	Sri N. Srinivasalu.
6.	What next in Agricultural extension.	Sri M. J. David.
7.	*What next in Agricultural Research and extension programme.	Sri C. Balasubramaniam.

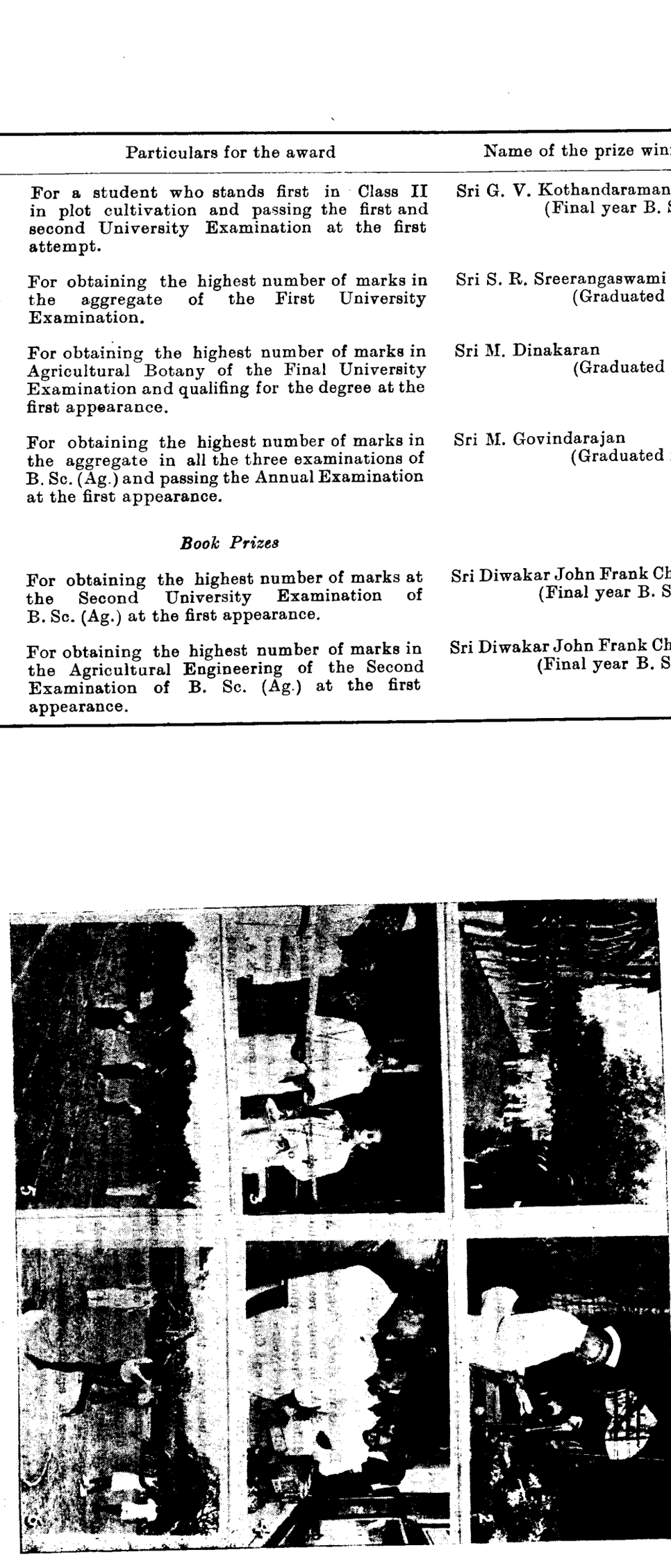
	Subject	Name
8.	The need for intense Research on Soil actinomycetes in India.	Sri G. Rangaswami.
9.	*What next in Agricultural Research and extension — Entomology.	Sri K. P. Anantha-narayanan.
10.	*What next in soil science.	Sri T. Rajagopala Iyengar.
11.	*Future of oil seeds Research in Madras State.	Sri C. R. Seshadri.
12.	*What next in Banana Research.	Sri T. Gopalan Nair, Sri J. Samuel Sundararaj, and Sri V. S. Seshadri.
13.	*What next in Cotton Research and extension in Madras State.	Sri N. Kesava Iyengar, and Sri V. Santhanam.
14.	*What next in Agricultural Research and extension — Recent advances and possibilities in Agricultural Research.	Sri T. R. Narayanan.
15.	What next in Fruit Research and extension in Madras State.	Sri T. Gopalan Nair.
16.	What next in Agricultural Extension programme.	Sri N. Ranganathachari.
17.	*What next in fertilisers.	Sri S. Venkatachalam, Sri A. M. Kulandai.
18.	*What next in Agricultural Research in Plant Pathology.	Sri M. Kandaswami.
19.	*What next in Agricultural Research and extension—Cytogenetics.	Sri N. Krishnaswami and Sri V. S. Raman.
20.	*What next in Millets and Pulses Research and Extension in Madras State.	Sri M. Bhavanisankar Rao and Sri B. W. X. Ponnaiya.
21.	Some suggestions for intensifying Plant protection work.	Sri S. A. Ebrahim Ali.

*These papers were presented at the conference and discussed.

Prizes awarded during the College Day & Conference

Name of the prizes	Particulars for the award	Name of the prize winners
	Medal Prizes	
1. The Robertson Prize Medal	For obtaining the highest number of marks in Agriculture in the Final Examination of the University in the B. Sc. (Ag.) and qualifing for the degree at the first appearance.	Sri S. Ramachandran (Graduated in 1955)
2. The Clogstoun Prize Medal	For obtaining the highest number of aggregate total marks in all the College Terminal Examinations and passing all the University Examinations at the first appearance.	Sri M. Dinakaran (Graduated in 1955)
3. The Kees Prize Medal	For obtaining the highest number of marks in Chemistry of the Final Examination of B. Sc. (Ag.)	Sri M. Dinakaran (Graduated in 1955)
4. The Dewan Bahadur R. Raghunatha Rao Prize Medal	For obtaining the highest number of marks in Practical Agriculture of both College Terminal and University Final Examinations of the B. Sc. (Ag.)	Sri M. Govindarajan (Graduated in 1955)
5. The D' Silva Memorial Prize Medal	For obtaining the highest number of marks in Animal Hygiene of the University Second Examination of B. Sc. (Ag.)	Sri R. Balakrishnan (Final year B. Sc. (Ag.)
6. The Goschen Prize Medal	For obtaining the highest number of marks in Agricultural Zoology of the University Second Examination of B. Sc. (Ag.)	Sri B. Vasantharaj David (Final year B. Sc. (Ag.)

Name of the prizes	Particulars for the award	Name of the prize winners
7. The Anstead Prize Medal	For a student who stands first in Class II in plot cultivation and passing the first and second University Examination at the first attempt.	Sri G. V. Kothandaraman (Final year B. Sc. (Ag.)
8. The Rao Bahadur K. S. Venkatarama Ayyar Prize Medal	For obtaining the highest number of marks in the aggregate of the First University Examination.	Sri S. R. Sreerangaswami (Graduated in 1955)
9. The Sampson Agricultural Botany Prize Medal	For obtaining the highest number of marks in Agricultural Botany of the Final University Examination and qualifing for the degree at the first appearance.	Sri M. Dinakaran (Graduated in 1955)
10. The Dewan Bahadur L. D. Swamikannu Memorial Prize Medal	For obtaining the highest number of marks in the aggregate in all the three examinations of B. Sc. (Ag.) and passing the Annual Examination at the first appearance.	Sri M. Govindarajan (Graduated in 1955)
	Book Prizes	
11. The M. K. Nambiar Prize Book	For obtaining the highest number of marks at the Second University Examination of B. Sc. (Ag.) at the first appearance.	Sri Diwakar John Frank Chandran (Final year B. Sc. (Ag.)
12. The Gupta Memorial Prize	For obtaining the highest number of marks in the Agricultural Engineering of the Second Examination of B. Sc. (Ag.) at the first appearance.	Sri Diwakar John Frank Chandran (Final year B. Sc. (Ag.)



1. The guard of honour by the students to the Ministers.
2. Hon'ble Shri Ajit Prasad Jain delivering the Inaugural address.
3. Hon'ble Sri K. Kamaraj Nadar opening the Exhibition.
4. The State Ministers at the Exhibition.

5 & 6. College Day Sports.

— Snaps by Students' Club Photographic Association.

NEWS AND NOTES

Indo - American Team :

Dr. Dean R. E., Buchanam, Dr. B. E. Leasure, Dr. A. H. Moseman, Members of the joint Indo-American Team for Agricultural Research and Education accompanied by Sri J. V. Nehmiah of the Indian Council of Agricultural Research Council visited Coimbatore on 11th August 1955 for studying the working of Agricultural education and completed their work by the 13th August.

The Team visited number of institutions including the Agricultural College and Sugarcane Breeding Station. The research work done in these institutions were explained to the members of team.

A meeting was held under the auspices of the Madras Agricultural Students' Union, with Sri R. Balasubramanyam,, Principal in the chair.

Dr. Buchanam addressing the gathering explained the working of agricultural education system in U. S. A.

Sri Balasubramanyam welcoming the team stated that members had come here to study working of agricultural education in India and hoped that on their completion of their tour they would submit a report. He believed that they would have a soft corner for Agricultural institutions when they chalked out programme of aid.

Dr. Buchanam stated Coimbatore Agricultural College resembled his own institute in U. S. A. in many respects though they recognised that nations and their needs differed. Speaker referred to starting of agricultural institutions in U. S. A. about hundred years ago and added very little distinction was made between University and College or Institution. Several farmers in U. S. A. agitated for improved standard of agricultural education since they felt adequate attention was not paid to Agricultural and Industrial education. Each state had its individuality and there was no central government for education. But National or Federal Government gave assistance to agricultural institutions.

Lands were also granted and income from endowments were utilised for agricultural expansion, research and teaching. Most of the states had their thus established agricultural institutions or industrial institutions. Colleges for teaching agriculture were also started with the help of land endowments besides research institutes. It was one of the main objects of the endowments that research workers in agriculture and engineering should be in touch with farmers and understand their needs and requirements. Speaker explained the working of Board of trustees in respect of agricultural education and said that Federal Government used to sanction some special grants also for carrying on certain special research works and for conducting agricultural stations in different states of the country. By agreement various colleges or institutions worked in close co-operation to have uniform standard.

Proceeding, speaker said that only about 25% of agricultural graduates sought Government service while some worked in their own lands and some sought private services in private firms. He was glad that government of India had sent similar team of five agricultural experts to U. S. A. to study working of agricultural education in that country. He hoped these mutual visits would prove useful to U. S. A. and India. India had made astounding developments since Independence and there has been rapid change in this country. Both countries must keep themselves in touch much closer.

Concluding, speaker said that 10% of farmers in U. S. A. were agricultural graduates and added there were many opportunities for agricultural graduates. Every year 300 firms invited applications from agricultural graduates and engineers. Those employed in private firms got better scales of pay.

First Aid Course :

The inaugural address of the first aid course which was newly started in the Agricultural College, Coimbatore, was delivered by Dr. Ariga, M. B. B. S., with Sri R. Balasubramaniam in the chair on 10—8—1955 Dr. Kuppuswami is conducting the course and Sri U. S. Sreeramulu of class ii is the Secretary of the local Association which is under the auspices of the Agricultural Students' Club. About 150 students are attending the course.

Students Club Elections :

A meeting of the Freshers was held on 1st August 1955 with Dr. A. Mariakulandai in the chair to elect a class representative for the 1st year class. Mr. V. Sivakumar was elected unanimously. At the same meeting Mr. Kothandaraman was elected as the 1st year representative for the Tatler Editorial Board and a volunteer corps was formed from the 1st year students with Mr. K. Khalil Ahmed as the leader. The followfng were selected as volunteers. Messrs. K. Kothandaraman, Varathan, Krishnan, Alexander Peter, Sivasankaran, Sridharan, Parthasarathy, Jaffer Hussain, David Ponniah and Miss Padmaja.

Tennessee University Team :

Dr. N. D. Peacock, Associate Dean and chairman of Agricultural University of Tennessee and a member of the Indo-American Tennessee Team addressed the members of the students' Club on 3rd August at 5 P. M. in the Freeman Hall. Sri R. Balasubramaniam, Principal, presided over the function.

Social Service :

Milk distribution was started on 15th of August to the children of Poosaripalayam village under the auspices of the Social Service League of the Agricultural students' Club. Inaugurating the milk distribution Mr. Sundaram Iyer, Lecturer in Chemistry, emphasised the importance of social service work.

New Club :

The foundation stone for the new club buildings was laid on 19—8—1955 by Sri M. Bhakthavatsalam; Minister for Agriculture.

Sports :

The Annual College Day Sports was held on the 21st of August. The prizes were given away by Mrs. Diaz, wife of the District Superintendent of Police, Coimbatore. Mr. K. Marappan of Class III won the Championship Cup. The following were the prize winners in the different events :—

1. *Cross country Race :* (5 miles) (The Norris Cup) (36 Minut 10 Sec.)
   (1) Annamalai, P. (2) Thottiappan. (3) Palaniappan, T. A.

2. *Pole Vault :* (8 ft. 8 inch.)
   (1) Sundaram, T. S. (2) Ganapathy, K. M. (3) Chinnappan.

3. *110 Meters Hurdles :* (The Ramaswami Sivan Cup) (18 4/5 Sec.)
   (1) Ramachandran Nambiar. (2) Marappan. (3) Javad Hussain.

4. *Shot Put :* (30 ft. 9¾ Inch.)
   (1) Ramachandran Nambiar. (2) Dharmarathnam. (3) Natarajan, K. R.

5. *100 Meters Dash:* (The Saidapet Old Boys' Cup) (11 1/5 Sec.)
   (1) Marappan. (2) Sundaram, T. S. (3) Ramachandran, C. V.

6. *Long Jump:* (16 ft. 9 Inch.)
   (1) Kochunni Kidav. (2) Ramachandran Nambiar. (3) Natarajan.

7. *Discus Throw:* (93 ft. 11½ Inch.) (New College record.)
   (1) Ramachandran Nambiar. (2) Viswanath. (3) Ratnavelu.

8. *200 Meters Hurdles:* (31 1/5 Sec.) (Naganna Gowd Cup.)
   (1) Marappan- (2) Ramachandran, C. V. (3) Jagadeesan.

9. *High Jump:* (5 ft.) (The Tadulingam Cup.)
   (1) Kochunni Kidav. (2) Ramachandra Nambiar. (3) Jagadeesan.

10. *200 Meters Race:* (25 1/5 Sec.)
    (1) Marappan. (2) Ramachandran, C. V. (3) Thottiappan.

11. *Invitation Race*: (800 Meters) (2 Minuter 9 3/5 Sec.)
    (1) Ramaswamy, K., (Govt. Arts College) (2) Joseph Varkey, (P. S. G. College of Technology) (3) Natchimuthu, Govt. College of Tehnology)

12. *Hop-Step und Jump:* (35 ft. 3¼ Inch.)
    (1) Sundaram, T. S. (2) Marappan. (3) Manickavasagam.

13. *Old Boys Competition*:
    (1) Subramaniam, T. L. (2) Varadarajan. (3) Jayaraman.

14. *400 Meters Race:* (The Prince of Wales Cup) (55 1/5 Sec.) (New Collego Record)
    (1) Marappan. (2) Kochunni Kidav. (3) Subbiah, G.

15 *Jevelin Throw:* (143 ft. 1½ Inch) (New Collego Record)
   (1) Ramachandran Nambiar. (2) Sundaram; T. S. (3)Ramachandrau, C.V.

16. *Staff Race for Men:* (100 Yards dash) (12 4/5) Sec.)
    (1) Dr. A. M. Kulandai. (2) Chandy, K. C, (3) Varadarajan, S.

17. *1500 Meters Race:* (The Anstead Cup) (5 mt. 2 3/5 Sec.)
    (1) Kochunni Nair. (2) Annamalai. (3) Thottiappan.

18. *Wamens' Race:* (50 Yards Race.)
    (1) Sivakami. (2) Savithri. (3) Padmaja.

19. *Hammer Throw:* (83 ft. 9½ Inch) New Collego Record.)
    (1) Ramachandran Nambiar. (2) Dharmaratnam. (3) Viswanath.

20. *Obstacle Race:*
    (1) Perumal Raja. (2) Theetharappan. (3) Ramachandran Nambiar.
    Vengayil Krishna Nainar's Cup. Champion:ship Cup. K. Marappan.

Weather Review — For the month of July, 1955

RAINFALL DATA (IN INCHES)

Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January	Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January
North	Madras (Meenambakkam)	2·4	— 1·2	17·5	South	Madurai	3·9	+ 1·9	12·6
	Tirurkuppam*	4·1	— 0·7	18·4		Pamban	0·0	— 0·5	13·7
	Vellore	5·4	+ 0·8	17·1		Koilpatti*	0·1	— 0·6	9 8
	Gudiyatham*	3·7	— 1·1	14·0		Palayamcottai	0·0	— 0·3	9·5
East Coast	Palur*	5·7	+ 1·2	29·7		Ambasamudram*	0·2	— 0·6	15·7
	Tindivanam*	3·1	— 0·7	14·6	West Coast	Trivandrum	3·9	— 3·9	38·9
	Cuddalore	5·2	+ 2·6	27·3		Fort Cochin	17·4	— 5·9	94·3
	Nagapattinam	2·4	+ 0 7	17·0		Pattambi*	9·9	- 15·7	60·5
	Aduturai*	1·5	— 0 7	18·0		Kozhikode	17·3	- 17·0	93·2
	Pattukottai*	0·4	— 1·5	9·6		Taliparamba*	24·6	- 22·0	90·0
Central	Salem	6·0	+ 2·2	17·6		Wynaad*	5·6	— 6·0	47·8
	Coimbatore (A. M. O.)*	0·7	— 1·1	10·4		Nileshwar*	41·0	— 6·1	125·4
	Coimbatore	0·6	— 1·1	12·8		Pilicode*	34·2	- 10·1	102·9
	Tiruchirapalli	1·8	+ 0·7	14·0		Mangalore	26·1	- 13·3	91·0
						Kankanady*	24·5	- 20·1	91·7
					Hills	Kodaikanal	3·7	— 1·0	36·1
						Coonoor*	2·1	— 1·3	19·9
						Ootacamund*	3·9	— 2·8	39·0
						Nanjanad*	3·4	— 7·0	38·7

Note:— * Meteorological Stations of the Madras Agric. Dept.

The low pressure area that lay over Vindhya Pradesh and north Madhya Bharat on 30—6—1955, weakned on 1—7—1955 and broke up over the Punjab-Kumaon Hills on 3—7—1955. A temporary break in the monsoon along the West Coast commenced on 3—7—1955. A low pressure area appeared over east Uttar Pradesh on 6—7—1955. This moved slightly westward persisted over north-east Rajasthan and adjoining Uttar Pradesh for three days and became unimportant on 10—7—1955. The monsoon was generally weak over the entire country on 12—7—1955 but it began to strengthen along the West Coast on 13—7—1955, causing widespread rains, in Malabar—South Kanara. The axis of the monsoon trough lay close to the foot of the Himalayas on 14—7—1955. A shallow trough of low pressure lay over Gangetic West Bengal, Bihar and adjoining Uttar Pradesh on 16—7—1955. This intensified to a depression of small extent over east Uttar Pradesh on 18—7—1955, persisted for two more days and broke up over the Nepal Himalayas on 21—7—1955. A shallow trough of low pressure appeared in the east central Arabian Sea off the Kanara coast on 22—7—1955, which slowly moved northwards and became less marked on 29—7—1955 off Konkan, causing widespread rains in Malabar South Kanara. The axis of the monsoon trough lay close to the foot of the Himalayas from 22—7—1955 upto the end of the month.

The south-west monsoon has so far been below normal throughout the country except in Assam, east Uttar Pradesh and parts of Hyderabad.

The note-worthy rainfalls and the zonal rainfall for the month are furnished below :—

Note-worthy Rainfalls			Zonal Rainfall			
Date	Name of Place	Rainfall in inches	Name of Zone	Average rainfall for June, 1955	Departure from normal	Remarks
15/7/55	Mercara	2·1	North	3·9	— 0·6	Just below normal
18/7/55	Kallakurichi	4·3				
23/7/55	Pilicode	3·5	East Coast	3·1	+ 0·3	Just above normal
25/7/55	Kozhikode	2·8	Central	2·3	+ 0·2	Just normal
25/7/55	Mangalore	3·3				
			South	0·8	nil	Normal
			West Coast	20·5	— 12·0	Far below normal
			Hills	3·3	— 3·0	do.

Agricultural Meteorology Section,
Lawley Road P. O.,
Coimbatore, 9—8—1955.

C. B. M. & M. V. J.

Departmental Notification

Gazetted Service—Postings and Transfers.

Name and present post	Posted as
Adyanthiah, R. Asst. in Mycology, Coimbatore.	Asst. Mycologist, Coimbatore.
Anantapadmanabha Pillai, R., Spl. D. A. O., Tanjore,	Supdt. C. F., Coimbatore.
Govindaswami, C. V., Crop and P. P. O., Mycology, Coimbatore,	Lect. in Mycology, Coimbatore.
Gopalan Nair, T., Horticulturist and Prof. of Horticulture, Coimbatore,	Banana Res. Officer, Aduthurai.
Kalyanasundaram, N. V., D. A. O., Madurai,	Vice Principal, Grama Sevak Training Centre, Gandhigram.
Krishnan, L., Vice Principal, Grama Sevak Training Centre, Gandhigram,	Asst. Marketing Officer, Trichy.

Name and present post	Posted as
Krishna Pillai, N., D. A. O., Ooty,	D. A. O., Coimbatore.
Kuppuswami, B. S., Asst. Fruit Specialist, Coonoor,	Asst. Fruit Specialist, Horticulture, Coimbatore.
Ponnaya, J. H. S., D. A. O., Coimbatore,	Block Dev. Officer, Chidambaram.
Ranganathachari, N., Teaching Asst. Coimbatore,	Spl. D. A. O., Crop sampling, Kozhikode.
Samuel Sundararaj, Banana Res. Officer, Aduthurai,	Asst. Fruit Specialist, Coonoor.
Subramaniam, T. V., Asst. in Mycology, Ooty,	Asst. Mycologist, Coimbatore.
Srinivasa Rao, B., Spl. D. A. O., Crop sampling—Kozhikode,	D. A. O., Ootacamund.
Thomas, K. C., Supdt., C. F., Coimbatore,	D. A. O., Madurai.

UPPER SUBORDINATES

Name and present post	Posted as
Arumugam, M., A. D., Peranamallur,	A. D., Madurai.
Alagappan, R. M.,	Asst. in Paddy, Coimbatore.
Achutha Kurup, K.,	Asst. in Fruits, Coonoor.
Abdul Latiff, A.,	Certification Inspector, Rajapalayam.
Andrade Faustine,	Spl. A. D., S. Kanara.
Abdul Kader, J. M. M.,	A. D., Villuppuram.
Arunachalam, V. G.,	Spl. A. D., Com. Project, Lower Bhavani.
Alagirswami, K. R., Block Dev. Officer, Coonoor,	Block Dev. Officer, Pudukottai.
Balasubramaniam, S.,	O. S. Dev. Asst., Cuddalore.
Balasubramaniam, K. R., A. D., Chingleput,	O. S. Dev. Asst., Cuddalore.
Bhaskaran Nambiar, K., A. D., Tudiyalur,	F. M., Tiruvazhamkunnan.
Chinnaswami, M.,	Spl. A. D., Manures, Tanjore.
Chowdappan, S. R., A. D., Uthukuli,	A. D., Sulur.
Dinakaran, M.,	Cotton Asst., Palur.

Name and present post	Posted as
Dharmaraj Moses, J.,	Spl. A. D., Manures, Tanjore.
Doraiswami, M.,	Spl. A. D., Tiruvellore.
Edwin Amirtharaj, A. D., Theni,	Block Dev. Officer, Coonoor.
Gopalan, N., O. S. Dev. Asst., Trichy,	O. S. Asst., Tindivanam.
Govindarajan, M.,	Fruit Asst., Coonoor.
George, A. J.,	A. D., Chowghat.
Govindan, K.,	A. D., Pernamallur.
Gunachandran, P. N.,	A. D., Madurantakam.
Hariharan, S. V., A. D., Trichengode,	A. D., Sattur.
Indran, M.,	Spl. A. D., Tindivanam.
Iruthaya Raj, M. R.,	Spl. A. D., Manures, Pattukottai.
Krishnan, R. H., Paddy Asst., Aduthurai,	Paddy Asst., Pattukottai.
Kuruvilla, M. J., Spl. A. D., Lower Bhavani,	P. P. S., Tellichery.
Kamalanathan, S., Certification Inspector, Rajapalayam,	Cotton Asst., Coimbatore.
Karuppanan, P. M., A. D., Vilathikulam,	A. D., Nellikuppam.
Karunakara Shetty, B.	O. S., Asst., Nileshwar.
Kathambavana Sundaram, M.,	Potato Asst., Nanjanad.
Krishnamaraj, A.,	A. D., Tiruvannamalai.
Kolandaiappan, K. A.,	A. D., Palacode.
Meenakshisundaram, V.,	A. D., Srivaikundam.
Madhva, O. T.,	Pepper Asst., Cananoor.
Muthiah, M.,	Spl. A. D., Chidambaram.
Muthiah,	A. D., Valavanoor.
Narayanamurthy, C. C., A. D., Minjur,	A. D., Arcot.
Narayanan, B. L.,	Spl. A. D., Manures, Tanjore.
Natarajan, V. R.,	Spl. A. D., Manures, Tanjore.
Narayanan, P. K.,	Paddy Asst., Pattambi.
Panniya, S., A. D., Radhapuram,	P. P. A., Ento., Tirunelvelly.
Ponnuswami, S. V.,	O. S., Asst., Tindivanam.
Periaswami, M.,	A. D., Radhapuram.

Name and present post	Posted as
Panchappakesan, V.,	Cotton Asst., Koilpatty.
Periaswami, N. K.,	Entomology Asst., Coimbatore.
Premanathan, P. P.,	Pepper Asst., Cananoor.
Prince, S.,	Spl. A. D., Pattukottai.
Promnath Alwa, M.	Spl. A. D. S., Kanara.
Ramachandran, P. K., A. D., Arni,	Paddy Asst., Taliparamba.
Rajagopala Reddy V. Paddy Asst., Pattukottai,	Paddy Asst., Aduthurai.
Ramasubbu G., A. D., Tiruvannamalai,	A. D., Vilathikulam.
Ranganathan S., A. D., Thandaranpet,	Extension Officer, Sankarankoil.
Ramiah S.,	Certification Inspector, Sankarankoil.
Ramakrishnan C.,	Entomology Asst., Coimbatore.
Radhakrishnan S. A.,	A. D., Barur.
Ranganathan Prabu K.,	Coconut Nursery Asst., Nileshwar.
Rajendran G. K.,	P. P. A., Ootacamund.
Ramadass N.,	Spl. A. D., Pattukottai.
Ramachandran C.,	Spl. A. D., Manures, Tanjore.
Ramaswami P., Spl. A. D., Cotton Sattur,	Spl. A. D., Udamalpet.
Ranganathan A. D., Valavanur,	Spl. A. D. Chidambaram,
Rajappan P. V., Fruit Asst., Coonoor,	Research Asst., Kallar.
Sivagnanam L., A.R.S., Asst., Koilpatti,	Millet Asst., Coimbatore.
Subramaniam T. N., A. D., Arcot,	A. D., Tudiyalur.
Srinivasan V., A. D., Sattur,	A. D., Karaikudi.
Sivarama Rai P.,	O. S. Asst., Nileshwar.
Sundirarajan V. V.,	O. S. Dev., Asst., Trichy.
Kumari Seemanthini B.,	Asst. in Tuber Crops., Coimbatore.
Samaraj Daniel,	A. D., Ootangarai.
Kumari Sukanya Bai,	Asst. in Paddy, Coimbatore.
Sriram T. A.,	Asst., Kallar.
Subramaniam,	Paddy Asst., Coimbatore.
Subramaniam,	A. D., Ootacamund.
Sankaran S.,	Millet Asst., Koilpatti.
Sekkappan S. P.,	P. P. A., Myco,, Karur.
Srinivasan V.,	Entomology Asst., Coimbatore.

Name and present post	Posted as
Sadagopan V.,	Spl. A. D., Pattukottai.
Sellanna Gounder V. R..	A. D. Barugur.
Sasibhushana Menon,	P. A. to D. A. O., Tellichery.
Sankaranarayanan, A. D., Kinathukadavu,	Spl. A. D. Cotton, Coimbatore.
Suryanarayanan S., F. M., Koilpatty,	Do. Do. Palladam
Shanmuga Nainar T. P. Agrl. Eng. Sup., Sattur,	P. A. to D. A. O. Trichy.
Samu Iyer P. V., A. D., Conjeevaram,	Cane Asst., Palur.
Thyagarajan N.,	A. D., Thandaranpet.
Thyagaraj R. S. T.,	Spl. A. D., Cotton, Palladam.
Thulasi Rao N.,	A. D., Thirukoilur.
Thanickachalam T.,	A. D., Ponneri.
Venkatram T. M., A. D., Walajah,	Horticultural Instructor, Coimbatore.
Varadachari T. E., A. D., Villupuram,	A. D., Gingee.
Vasudevan K. V., A. D., Chowghat.	Spl. A. D., Palghat.
Veeraraghavan S. N., Agrl., Instructor, Gandhigram,	Spl. A. D., Melur.
Xavier T.,	A. D., Chingleput.

DONATIONS TO M. A. S. U.

We acknowledge with thanks the sum of Rs. 25/- donated by Sri G. Venkatanarayana, B. Sc. (Ag.), Retired Principal, Agricultural College, Bapatla to the Madras Agricultural Students' Union.

Such donations from our well-wishers would help the Union and are always welcome.

The Management.

Third Conference of Chairmen of Market Committees

The third Conference of Chairmen of Market Committees of this State which was held at Villupuram on the 7th August, 1955 marked the chief event among the activities of Market Committees during the month. The Conference was inaugurated by Sri M. Bhaktavatsalam, Minister for Agriculture. A conference of this kind is held to take stock of the achievements and consider problems of common concern to Market Committees.

In his inaugural address the Minister traced the origin and development of Market Committees which he said had its roots in the recommendations of the Royal Commission on Agriculture more than two decades ago. He reviewed the progress of Marketing Legislation in the several States in India and in this State and explained succinctly the benefits of Regulated Markets. He said that the Act was being slowly but steadily extended and that it has been introduced at present in seven districts in this State in respect of the important commerical crops of the area. He referred in this connection to the opposition created by a section of the trade in the enforcement of the Act through writ petitions in the High Court and Appeal to the Supreme Court. He regretted that even after two decades of passing the Act misconceptions still existed in the minds of the public and explained that the object of the Act is not to interfere with the trade or to control the price or tax the producer. He cited the existence of similar legislation in advanced countries like U. S. A., U. K. etc. and said that it was all the more necessary in a country like India where people were educationally and economically backward. He expressed the hope that a net work of Regulated Markets will be established in all producting centres in

the State and that the day will not be far off when the objects of the Regulated Markets are fully understood by the people. He appealed in conclusion for the co-operation of the people in achieving the objectives of the Marketing Legislation of this State and the implementation of the schemes under Agricultural Marketing that have to be taken under the Second Five Year Plan. At the close of the inaugural session the Minister also opened a small Exhibition on Regulated Markets and their achievements organised by the South Arcot Market Committee for the occasion.

The Conference reassembled in the Afternoon when various problems relating to the working of the Act were discussed at length and resolutions passed.

One of the resolutions recommended the amendment of the relevant section of the Madras Commercial Crops Markets Act and the Election Rules so as to provide for the appointment of Members of Market Committees based on nominations by Government since the present system was cumbersome and costly. By another resolution the Conference recommended an amendment to the Act to provide for the functioning of Market Committees for a continuous period of five years instead of three years at present and also permit the existing Committees to continue pending the amendment to the Act as proposed. One other resolution requested the Government to modify the existing Act as the Madras Agricultural Produce Markets Act so as to apply it to all agricultural produce and extend it to all districts. The Conference urged further that an Expert Committee be appointed to investigate into the working of the Act.

The Chairman, Malabar Market Committee was appointed as convener of the next Conference and at his request it was also decided to have the Conference in Malabar.

Review of Market Conditions for Commercial Crops in the Areas of Market Committees During July 1955

Cotton: (In this Section: Candy 784 lb; Bale 392 lb; Pothi 280 lb.) The Cotton Market at Tirupur started with an opening stock of 9257 candies of Combodia and 2610 candies of Karunganni lint in the month. Arrivals during the month accounted for 8480 candies of Cambodia and 827 candies of Karunganni lint which included 150 candies of lint received from Salem, Tiruchirapalli and Madurai districts. Despatches from Tirupur were of the order of

6238 candies Cambodia and 1044 candies of Karunganni lint of which 1792 candies of lint went outside the notified area to destinations in Travancore–Cochin State, Bombay, Ahamadabad and other districts within the State. The closing stock was 11,499 candies of Cambodia and 2,393 candies of Karunganni lint at the end of the period under review.

The *kapas* market at Tirupur opened with a stock of 14,723 pothies of Cambodia and 3145 pothis of Karunganni *kapas* as the carry over stock of the previous month. Arrivals during the month amounted to 22,527 pothis of Cambodia and 4,319 pothis of Karunganni *kapas*. Disposals for ginning locally accounted for 21,787 pothis of Cambodia and 4,640 pothis of Karunganni *kapas*. The month end stock was 15,463 pothis of Cambodia and 2,824 pothis of Karunganni *kapas*.

In general the *kapas* market showed larger arrivals than in the previous month since the new kar crop season was at its peak.

At the Koilpatti market there was an opening stock about 1,000 pothis of Karunganni *kapas* while fresh arrivals from the neighbouring villages accounted for 1.500 pothis. Nearly 2,000 pothis of *kapas* were ginned and sold leaving a balance of about 506 pothis towards the close of the month.

The three markets of Virudhunagar, Sathur and Rajapalayam put together opened with a stock of 630 candies of Karunganni lint at the beginning of the month. Arrivals during the month accounted for 6,095 candies of lint which included 4,030 candies of Karunganni, 2,050 candies of Uganda and 15 candies of Cambodia. After the disposal of 4,800 candies of lint which included 2,735 candies of Karunganni 2,050 candies of Uganda and 15 candies of Cambodia, there remained a closing stock of 1,925 candies of Karunganni lint at the end of the month.

The transactions of *kapas* in the above three markets opened with a carry over stock of 350 pothis of Karunganni *kapas*. Arrivals during the month accounted for 35,800 pothis which included 30,200 pothis of Karunganni 23,400 pothis of Uganda and 200 pothis of Cambodia *kapas*. Disposals during the amounted to 43,800 pothis inclusive of 24,200 pothis Karunganni 19,400 pothis of Uganda and 200 pothis of Karunganni and 4,000 pothis of Uganda *kapas* adding upto 10,350 pothis in all.

Prices (Lint): At Tirupur the price of Cambodia lint was fluctuating between Rs. 857 to Rs. 892—8—0 per candy during the month. The prices of Karunganni lint at the same place were in the range of Rs. 730 to Rs. 785 per candy during the month. At Virudhunagar a steady tone was maintained with prices for different grades and types of Karunganni ruling as given below:

I crop	Rs. 650–686 per candy
II „	616–636 „
Tinny (Karunganni mixture)	590–610 „
Kamuthi Tinny	545–560 „

Prices of Karunganni lint at Koilpatti opened at Rs. 700 per candy for the I quality and Rs. 720/- for the best quality lint and gradually declined to touch Rs. 700/- for best quality and Rs. 780/- for the I quality in the IIIrd week of the month and remained steady thereafterwards. The Uganda lint market at Virudunagar and Rajapalayam opened at rates between Rs. 926–941 per candy for uncertified Cotton and Rs. 1,051–1,086 per candy for the certified lots. After an improvement during the middle of the month the rates closed at Rs. 975–986 for uncertified and Rs. 1,086–1101 for certified quality per candy towards the end of the month.

Kapas: The price of Cambodia *kapas* at Tirupur was seen fluctuating between Rs. 105/- to Rs. 110/- per pothi during the month. Prices of Karunganni *kapas* in the same market maintained a steady tone at Rs. 80–85 per pothi. The prices per pothi at Rajapalayam and Virudhunagar opened at Rs. 70–83 for the I crop and Rs. 51 to Rs. 68—4—0 for the II crop and steadily rose upto Rs. 77 to Rs. 87—8—0 for the I crop and Rs. 63–76 for the II crop in the later weeks but declined at the end of the month to Rs. 70–81 for I crop and Rs. 59–72 for II crop. Prices in Koilpatti opened at Rs. 79/- per pothi for I quality and remained steady during the month. The price for Uganda *kapas* in the above two markets which opened at Rs. 105 to Rs. 129—8—0 per pothi increased to Rs. 122–134 for the I quality and Rs. 107–118 for II quality which ruled firm till the first half of the month. Later the prices declined to Rs. 118–127 for the I quality and Rs. 107–114 for the II quality towards the end of the month.

Cotton Seeds: Prices of Karunganni cotton seed in Virudhunagar market which opened at Rs. 20–21 per pothi of 252 lb.

declined and closed at Rs. 80 to Rs. 19—6—0 per pothi of 252 lb. at the end of the month. Prices of Uganda cotton seed also, which opened in this market at Rs. 15/- per pothi rose upto Rs. 20/- and declined to Rs. 15—8—0 to Rs. 16—8—0 at the end of the month. Prices of Karunganni seed in Koilpatti market per pothi were fluctuating between Rs. 22–24 of 280 lb. during the month.

Groundnuts: (Candy in this section means 531 lb. of kernels and bags in 80 lbs. of pods.) The groundnut markets in South Arcot district opened with a stock of 2587 tons of kernels. Receipts in the eight regulated markets accounted for 7,217 tons of kernels which included 998 tons from places outside the district and 317 tons from outside the State. The quantity crushed by the expellers and rotaries amounted to 6508 tons and by village ghanies to 150 tons. Despatches accounted for 1694 tons and 26 tons respectively to places outside the district and outside the State. A closing stock of 2741 tons was left at the end of the month.

In the principal markets of North Arcot district roughly 1,101 tons of groundnut kernels and 750 tons of groundnut pods arrived during the month. Despatches to places outside the district amounted to 451 tons of kernels. After deduction for crushing purposes etc. there remained a closing stock of 350 tons of kernels at the end of the month.

The average prices of groundnut kernels in the different markets of South Arcot district, ranged from Rs. 95 to Rs. 112 per candy. Tht prices have shown some improvement over these obtaining in the previous month. Prices of kernels in North Arcot district which have ruling around Rs. 95/- rapidly improved to Rs. 115/- to Rs. 120/- per candy in the expectation of an export quota at the middle of the month but ultimately the rates went down and were seen fluctuating in the range of Rs. 150/- to Rs. 107/-. The prices of kernels in Virudhunagar market which opened at the rates of Rs. 95–110 per candy steadily increased to Rs. 112–123 per candy at the end of the month.

Gingelly: (Bag in this Section 168 lb.) The markets of South Arcot district started during the month with an opening stock of 375 bags with which a quantity of 457 bags were added by fresh arrivals. The important market for this commodity is Vridhachalam which alone accounted for a receipt of 332 bags out of the total arrival of 457 bags. One special feature of these

arrivals was that they were from the neighbouring districts. A quantity of 210 bags was cleared by the local crushing industry which includes 2 bags by oil mills and 208 bags by country chekkus. Despatches amounted to 32 bags leaving a closing stock of 726 bags.

The prices during the month gained a little and were ranging from Rs. 42–49 per bag.

Coconut: The four markets in Malabar (Kozhikode, Badagara, Ponnani and Tellicherry) had an opening stock of 6·6 million nuts as carry over stock of the previous month and received 9·2 million nuts during the months. Despatches and local sales accounted for 8·1 million nuts and 0·2 million nuts respectively leaving a closing balance of 7·4 million nuts.

Prices of coconuts in Malabar markets stood in the range of Rs. 95–135 per 1,000 husked nuts. The rates for coconuts in Mangalore market were moving between Rs. 140–165 per thousand for raw nuts and Rs. 165–200 for dry nuts.

Copra: (Candy in this Section 700 lb.) The copra market in Malabar opened with a stock of 2,036 candies. Arrivals during the month amounted to 3,310 candies. Disposals for local sales and despatches outside Malabar accounted for 2158 and 1375 candies respectively. There was a stock of 1813 candies at the close of the month.

Prices of copra showed some improvement during the month. The price ranges as between the different varieties in different markets are extracted below.

(Prices in Rs. per candy of 700 lb.)

Varieties	Kozhikode		Badagara	
	Maximum	Minimum	Maximum	Minimum
Office	340	325	315	305
Edible	365	335	325	320
Rajpur	425	400	420	405
Madras	380	375	370	365

At Mangalore also the prices revealed a slight improvement within the range of Rs. 307–344 per candy (unit of 700 lb.)

Arecanut: The stock of arecanut in Mangalore market opened with a quantity 3,300 cwts. at the beginning of the month and

13,000 cwts. were added to it from fresh arrivals. Exports accounted for 12,713 cwts. leaving a closing stock of 3,587 cwts.

The price of "Supari" which opened at Rs. 158–175 per cwt. improved to Rs. 160–182 at the end of the month. The price ranges of supari in Mangalore are indicated below:

(Prices in Rs. per cwt.)

Varieties	Maximum	Minimum
Magalore Supari	182	158
Malabar ,,	158	150
Choll ,,	185	160
Koka ,,	135	85

The stock of arecanut at Kozhikode and Ponnani opened with a quantity 994 bags of (100 lb. each) and 4,930 bags were received. Disposals amounted to 4,197 bags and 50 bags for despatches and local sales espectively leaving a carry over stock of 1,677 bags.

The prices of arecanuts in the district were ranging from Rs. 144–155 per bag during the month.

Tobacco: (Candy in this Section 500 lbs.) In Coimbatore district, 4,150 candies of chewing variety and 2,715 candies of cheroot variety were despatched outside the district to places in Malabar and Travancore–Cochin State. The month end stocks were estimated to be 14,145 candies of chewing and 7,145 candies cheroot tobacco.

The tobacco market was firm toned up by Rs. 50/- in the case of superior varieties and by Rs. 20 to 30 in the case of other varieties.

The prices ruling as between the different varieties are indicated below:

(Price in Rs. per candy of 500 lb.)

Variety	I grade Rs.	II grade Rs.	III grade Rs.
1. *Chewing tobacco* (Sun cured)			
(a) Meenampalayam	500–550	400–450	250–350
(b) Other varieties	425–450	275–350	200–250
(c) Pit cured (grown in Palladam & Sulur areas)	200–250	160–190	100–140
2. *Cheroot varieties* (Sun cured) grown in Erode and Bhavani taluks	250–300	175–225	120–150

Activities of the Market Committees during the month of July 1955

Of the seven market committiees in the State only five in the districts of North Arcot, South Arcot, Coimbatore, Malabar and South Kanara continued to be actively functioning. The activities of the Committees at Ramanathapuram and Tirunelveli continued to be restrained due to injuction order of the Madras High Court.

The following progress was made by the Market Commitees during the month in the issue of licences under Madras Commercial Crops Market Act.

	Section 5 (1)		Section 5 (3)		Weighman		Broker	
	A	B	A	B	A	B	A	B
North Arcot Market Committee	56	790	9	352	8	287	...	10
South Arcot Market Committee	176	1519	190	1512	238	780	...	3
Tirunelveli Market Committee	...	36	...	15	...	17	...	...
Malabar Market Committee	54	359	113	1083	40	166	...	5
South Kanara Market Committee	5	209	4	175	...	38	...	...

(A—During the month B—Upto month)

The total of transactions in the commercial crops in 13 Regulated Markets in the State during July, 1955 is shown consolidated below:

Crop	Quantity	No. of Regulated Markets
Groundnut kernels	7717 tons	8
Gingelly Seeds	463 bags	5
Cotton lint .	1,506 Cdys.	3
,, Kapas	9,390 Pothis	3

(Cdy. 784 lb. Pothi: 280 lb. Bag: 168 lb.)

Meetings: A meeting of the Committee was held by South Arcot Market Committee during the month when two subjects were discussed and disposed of. A meeting of the Malabar Market Committee was held at the Regulated Market premises at Kuttipuram during the month and eighteen subjects were discussed at the meetings.

Special Feactures: A regulated market of Malabar Market Committee for arecanut was declared open at Kuttipuram by the Minister for Agriculture on 8—7—1955 when Sri A. V. Govinda Menon, Retired District Judge presided. The function was largely attended by growers, traders and other prominent people of Malabar. About 100 lbs. bags of cured arecanut had also been assembled at the market of which the first bag was auctioned by the Minister for Agriculture for Rs. 155/- a cwt. Arrangements are on way for opening another regulated market for Malabar Market Committee at Talakadathur.

Quality Appraisal: South Arcot Market Committee continued jts work on the studies on the quality of groundnut kernels marketed in six of its regulated market including Panruti on the basis of random sampling. A total of 683 samples of kernels was drawn from arrivals of 30,247 lots comprising 5306 tons and each lot was analysed for the quality factors. The board details of the analysis comprising determination of dryage and total refractions (compresing of (i) dirt and foreign matter, (ii) nuts in shell, (iii) splits, (iv) damaged, (v) brokens and (iv) shrivelled) are of interest and are given below:

Particulars	Panruti	Cuddalore	Villupuram	Tindivanam	Tirukkoilur	Virdhachalam
1. *Dryage:*						
2% and below	..	31	6	27	18	45
Above 2% and upto 3%	1	17	2	9	..	39
,, 3% ,, 4%	2	30	7	8	28	26
,, 4% ,, 5%	4	10	5	6	..	9
,, 5% ,, 10%	64	55	43	40	92	4
Over 10%	33	13	3	6	..	..
2. Total refraction						
4% and below	30	30	4·14	..	60	123
Above 4% upto 8%	104	104	..	30	67	..
,, 8%	22	22	10·47	66	11	..

As seen above the moisture content in the kernels marketed at Tirukoilur and Panruti seems to be rather high. The quality of groundnut kernel marketed at Vridhachalam appears difinitely superior to others both in point of moisture and total refractions.

Crop and Trade Reports

Sugarcane—First Forecast Report—1955-'56 Madras State: The area under sugarcane in the Madras State upto 25th May 1955 is estimated at 63,150 acres (49,590 acres under planted crop and 13,560 acres under ratoon crop). Compared with the area of 62,000 acres (47.230 acres under planted crop and 14,770 acres under ratoon of crop) estimated for the corresponding period of last year and the average area of 55,660 acres for the previous five years ending 1954'55 the present estimate is an increase of 1·9 percent over that of 1954-'55 and 13·5 percent over that of the quinqunium 1951-55. A decrease in area is estimated in the districts of Salem and Madurai the area estimated is the same as that of last year in the districts of Tirunelveli and Malabar and an increase in other district of the State, except the Nilgiris where the area under the crop is little or negligible. The condition of the crop is reported to be generally satisfactory in all the districts of the State.

The average wholesale price of jaggery in imprortant market centres per maund of 82 2/7 lb. or 3,200 tolas on 18—6—1955 was Rs. 16—3—0 in Mangalore, Rs. 9—11—0 in Coimbatore, Rs. 8—0—0 in Tiruchirapalli, Rs. 7—8—0 in Vellore and Rs. 7—6—0 in Cuddalore. Compared with the prices which prevailed on 19—6—1954, these prices registered a fall of 52·8 percent in Cuddalore, 45·3 porcent in Tiruchirapaili, 40·0 percent in Vellore, 17·6 porcent in Coimbatore and 15.4 percent in Mangalore.

Bengalgram—1954-'55 Third and Final Forecast Report, Madras State: The area sown with bengalgram in Madras State in the year 1954-55 is estimated at 5,200 acres. Compared with the actual area of 4,320 acres for the previous year and the average area of 4950 acres for the proceding five years, the present estimate shows an increase of 20·4 percent and 5·1 percent respectively. The crop is not grown in the districts of Tanjore, Malabar, South Kanara and the Nilgiris. An increase in area is estimated in the districts of South Arcot, North Arcot, Salem, Coimbatore, Tiruchirapalli, Ramanathapuram and Tirunelveli and a decrease in area in Madurai district.

The crop has been harvested in most of the districts. The seasonal factor for the state as a whole works out to 99 per cent of the normal as against 93 per cent of the normal estimated for the previous year. On this basis the yield is estimated at 1,150 tons. Compared with the estimated yield of 900 tons for the previous year and an average yield of 830 tons for the preceding five years ending with 1953-54, the present estimate shows an increase of 27·8 per cent and 38·6 per cent respectively.

The wholesale prices of bengalgram per standard maund of 82 2/7 lbs. or 3,200 tolas as reported from important market centres on 14—5—1955 were Rs. 10—10—0 at Coimbatore and Rs. 10—13—0 at Salem. Compared with the price of Rs. 18—1—0 which prevailed at Salem in the corresponding period of the previous year, this year's price shows a decrease of 74·6 per cent.

Tobacco—Third and Final Forecast Report—1954-'55—Madaas State: The area sown with tobacco in the Madras State in 1954-55 is estimated at 43,500 acres. Compared with the actual area of 39,200 acres for the previous year and the average area of 43,700 acres calculated for the previous five years ending with 1953-54, the present estimate shows an increase of 11·0 per cent and a decrease of 0·5 per cent respectively. The increase in area this year is due mainly to favourable seasonal conditions. An increase in area is estimated in all the districts of the State except Chingleput, Malabar and the Nilgiris districts where the area under the crop is little or negligible. The crop has been harvested or is being harvested in parts of the State. The crop is reported to have been affected by aphids in Coimbatore district, The yield per acre is normal in the district of South Kanara and below the normal in all the other districts of the State. The sesonal factor for the State as a whole works out to 92 per cent of the normal for Nicotiana Rustica, 98 per cent of the normal for Virginia variety of Nicotiana Tabacum and 92 per cent of the normal for all other types of Nicotiana Tobacum as against 9,596 and 95 per cent of the normal respectively estimated for the previous year. On this basis, the total yield works out to 24,200 tons of cured leaf as against 22,800 tons of cured leaf estimated for the previous year, representing an increase of 6·1 per cent. Compared with the average yield of 20,400 tons calculated for the five years ending with 1953-54, the present estimate is an increase of 18·6 per cent.

The wholesale price of tobacco per standard maund of 82 2/7 lb. or 3,200 tolas as reported from important market centres on 14—5—1955 was Rs. 41—0—0 in Erode and Rs. 45—8—0 in Tiruppur. Compared with the prices which prevailed on 15—5—1954, these prices reveal an increase of 4·1 per cent in Erode and a decrease of 28·1 per cent in Tiruppur.

Crop-Redgram—Third and Final Forecast—1954-'55—Madras State: The area sown with redgram in Madras State in 1954-55 is estimated at 1,77,100 acres compared with the actual area of 1,74,200 acres in the previous year, it is an increase of 1·7 per cent. Compared with the average area of 1,60,500 acres calculated for the five years ending with 1953-54 it is an increase of 10·3 per cent.

The crop is mainly grown in the districts of South Arcot, North Arcot, Salem, Coimbatore and Tiruchirapalli. The area estimated is the same as that of last year in South Kanara district. An increase in area is estimated in all the districts except in Salem, Coimbatore, Madurai and Ramanathapuram, The area under the crop is nil or negligible in the Nilgiris district.

The crop has been harvested in most of the districts of the State. The yield per acre is estimated to normal in Tanjore and slightly below normal in the other districts of the State. The seasonal factor for the State as a whole works out to 96 per cent of the normal as against 95 per cant for the previous year. On this basis, the total yield works out to 25,300 tons of cleaned gram as against 24,700 tons (cleaned gram) estimated for the previous year and an average of 23,200 tons (cleaned gram) calculated for the five years ending 1953-54, representing an increase of 2·4 per cent and 9·1 per cent respectively.

The wholesale price of Tur dhall per standard maund of 82 2/7 lbs or 3,200 tolas as reported from important market centres on 14—5—1955 was Rs. 18—0—0 in Tirunelveli, Rs. 13—3—0 in Vellore, Rs. 13—10—0 in Salem and Rs. 13—4—0 in Tiruchirapalli. Compared with the prices which prevailed in the corresponding period of last year, the prices reveal a decrease of 30·3 per cent in Tiruchirapalli, 22·7 per cent in Salem and 21·3 per cent in Vellore while the price in Tirunelveli was the same as that of last year.

Crop Forecast—Korra crop—Madras State—1954-'55—Third or Final Report: The area sown with Korra or Tenai (Setaria Italica) in the Madras State in 1954-55 is estimated at 93,400 acres. Compared with the provisional figure of area of 94,900 acres in the previous year according to the Season and Crop Report, the current year's estimate is a decrease of 1·6 per cent. Compared with the average area of 88,900 calculated for the five years onded 1953-54, the present estimate is an increase by 4,500 acres or 5·1 per cent. The corp is not grown in South Kanara district. The area estimated is the same as that of the last year in the district of Chinglepet, Tiruchirapalli, Tanjore, Tirunelveli, Malabar and the Nilgiris. An increase in area is estimated in Ramanathapuram district and a

decrease in all the other districts of the State. The bulk of the crop has been harvested. The yield per acre is estimated to be normal in the districts of South Arcot, Salem and Tanjore and below normal in the other districts of the State. The seasonal factor for the crop (Kharif and Rabi) for the State as a whole works out to 97 per cent of the normal as against 91 per cent in the previous year. On this basis, the total yield works out to 29,600 tons of unhusked grain or 23,700 tons of cleaned grain. Compared with the provisional estimate of 29,200 tons of unhusked grain or 23,400 tons of cleaned grain according to the Season and Crop Report for the previous year, the current years estimate represents an increase of 1·4 per cent. The present estimate reveals an increase of 29·8 per cent as compared with the average production of 22,800 tons of unhusked grain or 18,200 tons of cleaned grain calculated for the five years ended 1953–54.

Crop Forecast—Varagu Crop—Madras State—1954-'55—Third or Final Report: The area sown with varagu crop (Paspalum Scrobiculatum) in the Madras State in 1954–55 is estimated at 8,32,500 acres. Compared with the provisional figure of area of 9,35,500 acres in the previous year according to the Season and Crop Report, the current year's estimate is a decrease of 11·0 per cent. Compared with the average area of 7,19,200 acres calculated for the five years ended 1953–54, the present estimate is an increase of 17 2 per cent. The crop is not grown in South Kanara district. The area estimated is the same as in 1953–54 in the districts of Malabar and the Nilgiris. An increass in area is estimated in the districts of Coimbatore and Tirunelveli and a decrease in the remaining districts of the State.

The bulk of the crop has been harvested. The yield per acre is estimated to be normal in the districts of South Arcot, Salem, Coimbatore, Tiruchirapalli, Tanjore, Tirunelveli and Ramanathapuram and below normal in the other districts of the State.

The seasonal factor for the crop (Kharif and Rabi) for the State as a whole works out to 98 per cent in the previous year. The toal yield works out to 3,55,300 tons of unhusked grain or 2,13,300 tons of cleaned grain. Compared with the provisional estimate of 3,97,100 tons of unhusked grain or 2,38,300 tons of cleaned grain according to the Season and Crop Report for the previous year, the current year's estimate shows a decrease of 10·5 per cent. The present estimate reveals an increase of 39·3 per cent as compared with the average production of 2,55,100 tons of unhusked grain or 1,53,000 tons cleaned grain, calculated for five years ended 1953–54.

Crop Forecast—Samai Crop—Madras State—1954-'55—Third or Final Report: The area sown with Samai (Panicum Miliare) in the Madras State in 1954–55 is estimated at 5,71,800 acres. Compared with the provisional figure of area of 5,81,900 acres in the previous year, the current year's estimate is a decrease of 1·7 per cent. But it shows an increase of 24·4 per cent over the average area of 4,59,500 acres estimated for the five years ended 1953–54.

The area estimated is the same as that of the previous year in the districts of Chingleput, Tanjore, South Kanara and the Nilgiris. An increase in area is estimated in the districts of Coimbatore, Tiruchirapalli, Madurai, Ramanathapuram, Tirunelveli and Malabar and a decrease in the other districts of the State.

The crop has been harvested or is being harvested in most of the districts. The yield per acre is estimated to be normal in the districts of Tiruchirapalli, Tanjore, Tirunelveli and Malabar slightly and below normal in the other districts of the State.

The seasonal factor for the crop (Kharif and Rabi) for the State as a whole works out to 96 per cent of the normal as against 94 per cent in the previous year. On this basis, the total yield works out to 1,06,500 tons of unhusked grain or 58,600 tons of cleaned grain. This yield is the same as that estimated for the previous year but shows an increase of 47·3 per cent over the average production of 72,300 tons of unhusked grain or 39,800 tons in terms of cleaned grain calculated for the five years ended 1953–54.

Gleanings

Coconut Beetle: All coconut growers know of the coconut beetle, the stout-built black insect that damages the palms by boring into the unopened fronds and chewing the juice from the fibrous material. Latest experiments show that this pest can be put down with certain chemicals.

Applying a mixture of 'Chlorodyne' five per cent and sand, or BHC five per cent and sand in equal quantities, at the leaf axils and holes bored by the pest gives good relief. 'Chlorodyne' is more effective than BHC. Palms treated with it remain immune against beetle attack for about three months.

The beetle spends its earlier stages in manure pits. Such breeding grounds should also be treated with BHC or 'Aldrin'. If it is BHC, use one ounce of the 50 per cent wettable powder in a gallon of water, and, if 'Aldrin,' use 40 per cent wettable powder in about 12½ gallons of water, and spray.

A New Spinach: At the Agricultural Research Station at Koilpatti, we have a new spinach (*Talinum triangulare*). It is the Ceylon spinach, recently introduced from Ceylon, and being tried at the various Agricultural Research Stations in Madras State.

From what we have seen of this spinach variety at Koilpatti, it looks as if it is going to have a bright future.

The leaves and stems of Ceylon spinach are delicious when cooked like any of the greens. They are not so gummy as those of the common spinach and hence make a vegetable very pleasing to the palate. The plant's ability to thrive under shade with the minimum care is also responsible for its popularity. This new variety has taken the fancy of many persons who raise kitchen and school gardens, as it forms and ideal shade-loving hedge plant.

Cuttings, about six inches long strike roots within ten days of their plantins and the plants attain a height of two feet in three weeks' time. From then onwards, cuttings once in every three weeks can be taken.

An area of ten cents is being continuously croped with Ceylon spinach under the shade of kapok trees at the Agricultural Research Station, Koilpatti, for the past two years. Cuttings planted on ridges one foot apart with a spacing of nine inches between plants have given a calculated acre-yield of 60,000 pounds of tender leaves and stems fit for cooking every year.

The plant flowers throughout the year. The flowers are small and pink in colour. They open at about 9 a. m. and wither away by 4 p. m. It pleases the eye to see the crop in full bloom at 12 noon

The plant produces tiny black seeds do not germinate and grow unless there is a copious supply of water. Hence, it has no chance of becoming a weed.

The cutting and seeds of this plant can be obtained from the Agricultural Rssearch Station, Koilpatti.

Growth Regulators: These compounds, also known as plant hormones, auxins and growth substances, are capable of producing, in a varioty of ways, profound changes in the basic life-processes of plants. Particularly versatile are the phenoxy compounds. These compounds can intensify the colour of fruit, can make the petals stay on flowers longer, can increase the water-retaining power of plants, can make fruits ripen earlier, and can totally check fruit-setting on ornamental trees.

Growth regulators, in general, not only accelerate the respiration of plants, but also increase the activity of their enzymes and cause plants to accumulate the simpler forms of carbohydrates (sugars instead of starches). According to present indications, however, growth regulators do not stimulate photosynthesis.

Naphthaleneacetic acid and 2, 4-D can retard the dropping of fruits from apple and pear trees. The former can also be used to thin out the blossoms of fruit trees to prevent the breaking of branches under excessive load of fruits later on. By using 2, 4-D, pineapple growers can increase their crop yields and accelerate the ripening of the fruit. With Maleic-hydrazide, the growth of grass can be retarded or stopped altogether.

Growth regulators are made use of in many other ways. For example, the methyl and ethyl esters of naphthaline acetic acid can prevent the sprouting of potatoes in storage. 4-chlorophenoxyacetic acid can accelerate the growth of figs and produce fruits without seeds- 2, 4, 5-T, by preventing the buttons from falling of lemons, and can minimize the hazards of fungus attack during storage.

ERRATA

Page 301	Para 2	Line 6	read	Pothies of cambodia instead of candies.
,,	,,	,, 7	,,	Pothies instead of candies.
,,	,,	,, 7	,,	Kapas instead of lint.

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(1)	(2)	(1)	(2)