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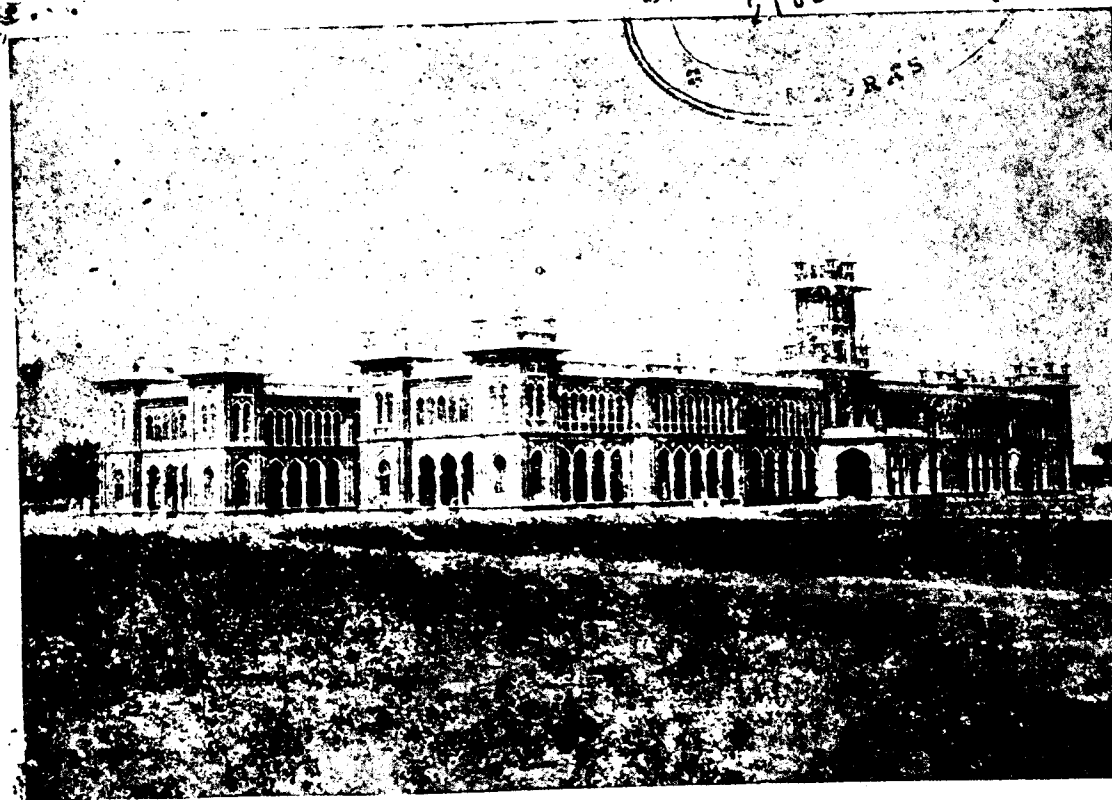
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2. The prize will be in the form of a medal and will be awarded to the member of the Union who submits the best account of research or enquiry, carried out by him on any agricultural subject.
3. The subject matter shall not exceed in length, twelve foolscap pages, typewritten on one side.
4. Intending competitors should notify the Secretary of the Madras Agricultural Students' Union with a covering letter giving the full name and address of the competitor. The author's name should not be shown on the paper, but should be entered a *nom-de-plume*.
5. Four typewritten copies of the paper should be sent.
6. The name of the successful competitor will be announced and the prize awarded at the time of the College Day and Conference.
7. Paper or papers accepted will become the property of the Union, and the Union reserves to itself the right to publish all or any of the papers.
8. All references in the papers to published books, reports or papers by other workers must be acknowledged.
9. The last date for receipt of papers is 1st June 1955.
10. Further particulars may be obtained from the Secretary, Madras Agricultural Students' Union, Lawley Road P. O., Coimbatore.

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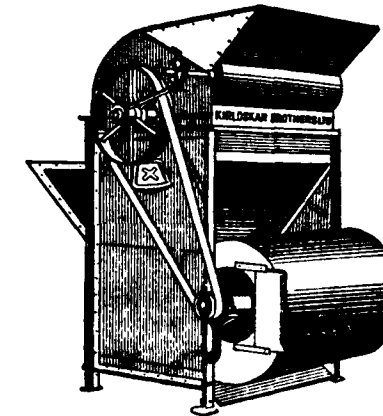
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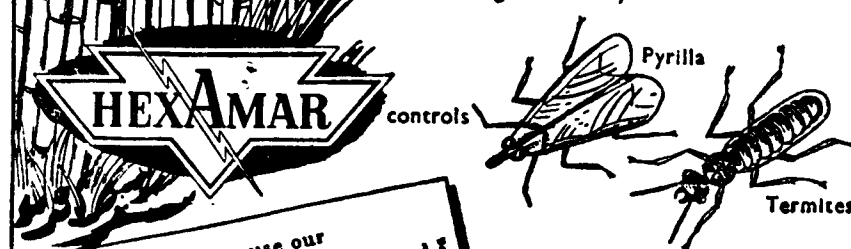
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Editorial

Drink more milk campaign was launched throughout the Madras State in April by the Chief Minister Sri Kamaraj Nadar. The Health Minister Sri A. B. Shetty speaking on the occasion said "to suggest milk diet to our underfed people may seem a mockery like Marie Antoinette asking the poor to eat cake, if they have no bread". "The low consumption of milk in this country is due not only to its high price but also its scarcity." But with the cattle population of India at nearly one fifth of the world, this situation may seem anomalous, but it is really so. Firstly, we have too many scrub cattle eating up the valuable fodder which may be profitably given to other economic breeds. Secondly, the dry cows are not well cared for and it is a simple matter of nutrition that a poorly tended dry cow will turn out to be a poor milch cow. The Government have set up salvage farms for dry cows in Madras and this should go a long way in saving and maintaining valuable animals. We have a duty cast to teach our farmers good methods of breeding and management.

A third factor which has tended to the poor status in our milk industry is the low premium attached to quality in milk in our country. The local milk vendors are able to sell milk at competition rates by making up with water what is lost in price. The twenty milk supply unions of the Madras State have consequently to contend with small traders who stoop to all sorts of adulteration of milk and thus are able to sell milk at a lower price. The consumers with no facility to check up quality on the daily purchase, but carried away by the lower price go in for the local vendors, much to the

detriment of the milk supply unions. If these milk supply unions, which are only collecting and distributing agencies guaranteeing legal standards of milk, find it difficult to vie with local vendors, it would be much more difficult for an efficient dairying concern to put out wholesome milk under pasteurised conditions with its attendant increased cost. This state of affairs in this country is obviously due to the fact that one can practice adulteration of milk with equanimity without any fear of being caught in spite of laws and legal standards existing in the country. For, very few prosecutions really take place. It has to be inculcated into the people at large that the practice of adulteration is as much anti-social and criminal as thieving. Such large scale adulteration can be prevented only by special methods designed to fight the menace. Further, the enforcement of punishment should be quick and deterrent and not a long drawn out litigation as is obtaining now. If all the malpractices in the milk trade are put an end to, quality in milk would be assured. And drinking wholesome pure milk is more important than drinking just more milk, which if contaminated and adulterated would be not only nutritionally incomplete but also dangerously unhealthy.

Recent Advances in Agriculture—Plant Introduction and its Further Possibilities

by

D. DANIEL SUNDARARAJ and D. MEENAKSHISUNDARAM
Systematic Botany Section,
Agricultural College and Research Institute, Coimbatore

Introduction: In the crop improvement programmes, the introduction of species and varieties forms an integral part. The introduction of plants of economic value from another place where these have already been tried and exploited, is a direct and easy method in agricultural development. In fact, most of the cultivated plants of the various countries are such introductions made sometime or other. DeCandolle (1904) and Vavilov (1931) have dealt extensively on the origin of the cultivated plants. Rajasekhara Mudaliar (1953) has given a complete review of the plant introduction work in the different countries in the recent times in general and has stressed on the aspects of grasses and legumes in particular. Wenholtz (1929) mentions that all the chief cultivated farm, fruit and vegetable crops grown in Australia had originally to be introduced from some other part of the world. McCann (1950) says that every major crop grown in the United States of America is an immigrant. In an eminently agricultural country like ours, the importance of plant exploration and introduction needs no emphasis. The former concerns with the search for wild species of economic value for bringing them under cultivation while the latter deals mainly with the introduction of plants of desirable qualities, from foreign countries with the object of improving our cultivated crops.

Significance of Plant Introduction: Some economically useful plants such as food-crops or plants useful as a source of raw material for industries can be *directly utilized* by introducing and cultivating in suitable areas in our country. Rajasekhara Mudaliar (loc. cit.) gives a detailed account of many such introductions made in our country, as Cinchona, Para rubber, Cashewnut, etc., and brings out the possibility of many more introductions. Such additions of new plants of commercial importance and their cultivation on a large scale will bring in industrial development also.

Introduced species and varieties of plants may be useful *indirectly* in increasing the range of material on hand for breeding purposes; it is well known that the chances of producing desired types are dependent upon the initial breeding material. Pal and

Ramanujam (1946) have stressed the importance of the introduction of exotic species and varieties, their systematic study and classification with regard to their inherent useful characters, as an important preliminary step in any crop breeding programme. Some of the exotic species and varieties may be highly useful in contributing "the genes" for resistance to diseases and pests and it is very evident that the plant breeder is able to produce varieties to suit multitudes of purpose, when only he has comprehensive collections which represent the most complete assortment of the characters found in the plants concerned.

Building up of a collection of varieties, forms, types, eco-types and races of a particular species of crop is a great necessity for a breeder as only from such a varying plant material he will be in a position to select the suitable improved type for the purpose intended. In most of the cultivated crops which have been very early introductions and which have stayed on as agricultural crops, a good number of strains have been evolved by the application of the principles of pure-line selection to naturally varying populations or to segregating progenies of inter-varietal crosses. Plant introduction will help to build up such a collection of varying types. With the greater scientific data available on the growth and developmental aspects of plant life, there will be greater scope for getting types with certain advantageous characters, by plant introduction.

The introduction of a particular type from another region with different temperature and length of day may result in the luxuriant growth of the vegetative parts and the suppression of the reproductive phase. In plants in which the vegetative growth and output are the primary considerations as in fodder grasses, fodder legumes, green manure plants, leafy vegetables, leaf and stem fibres, soil conservation plants, etc., there is scope for improvement by Plant Introduction. A couple of instances may serve as a pointer. In South India, we have the indigenous species of *Panicum antidotale* and *Brachiaria mutica* occurring wild. But these grasses as they occur in the wild conditions are not productive types to be of economic value. But the plants of *Panicum antidotale* raised from the seeds received from Australia are different in growth behaviour and have proved to be a good drought resistant grass not only for South Indian conditions but also for the other States. Similarly the type of *Brachiaria mutica* introduced from Ceylon has so much of vegetative growth, that the seed production is negligible, enhancing the nutritive value of the grass.

As shown above it is quite probable that a particular species or type, of a region though may not be having economic characteristics in that region, may have potentialities of advantageous utilisation in another country. As such the introduction of plants, their testing in gardens paying close attention and acclimatization of the promising ones will definitely add to the national wealth. And in fact, it is with this object in view the Commonwealth Agricultural Bureau, England has drawn attention to the recommendation of the Review Conference 1950 that all the research centres maintaining living collections of economic plant material should be invited "to give at least 12 months' notice of their intention to discard any of their material likely to be useful to member countries".

Work of Plant Introduction in Madras: The Botany Section of the Agricultural Research Institute, Coimbatore has been serving as the Plant Introduction Centre for the State, in a very modest way. The introductions have been mostly on grasses and legumes. The section collaborates with the Plant Introduction Wing of the Indian Council of Agricultural Research at New Delhi. There is a great possibility of intensifying this item of work covering a larger number of other economic crops than those now dealt with. Rajasekhara Mudaliar (loc. cite) in his comprehensive treatment on this subject has stressed the importance of (1) the formation of an efficient Plant Introduction Bureau & (2) the Systematic Survey of the plant wealth of the country.

From a study of the Crop improvement steps taken in countries like United States of America, Australia, and European countries, phenomenal success had been achieved by Plant Introduction in the matter of food self-sufficiency, industrial raw plant material, fodders and soil conservation plants. With the much advantageous climatic conditions as available to us on the plains and on the different altitudes of the hills of Nilgiris, Madura and Yercaud and the slopes of the Western Ghats, the Plant Introduction work has great possibilities.

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Studies on the Headsmut of Sorghum

by

N. V. SUNDARAM

Mycology Section, Agricultural Research Institute, Coimbatore

Introduction: Sorghum forms one of the important food grains of the Madras state. It is grown over an area of 18 lakhs of acres. Several diseases are known to affect this crop. Of these the smuts are the most damaging. There are four kinds of smuts recorded on this crop in the Madras state. These are the grain smut, the loose smut, the long smut, and the head smut. The head smut is common in several districts in the state and in some years it has been observed to infect about five per cent of the crop in parts of Coimbatore and Salem districts. The entire ear head is transformed into a sorus which is covered by a thin whitish membrane in the early stage. Sooner or later the membrane is ruptured and a black mass of spores mixed with numerous fibres is exposed. The occurrence of this smut has been found to be greater in rainfed crops than in irrigated crop.

This smut has been recorded from America, Africa, and India. The causal fungus has undergone several changes in its nomenclature and is at present called *Sphacelotheca reiliana* Clint. The germination of the spores and the mode of infection of the smut have been studied by Potter (1914). He established that the smut is soil-borne. Kulkarni (1918) working in this disease in India was not able to observe the germination of the spores. He has stated that the disease was not seed-borne and he could not get infection when the seeds were mixed with the spores before sowing. In order to determine the maximum period during which the spores remain viable and also to find out how long the spores can survive in the soil, studies were undertaken and the results are communicated in this paper.

Materials and Methods: The spores were collected from fresh material, dried under shade for 48 hours and stored in envelopes made of butter paper. The germination of the spores was tested by floating the spores on drops of tap water on slides kept inside Petri-dishes lined with moist filter paper. Germination counts were made after 24 hours. The plants were grown in glazed pots of uniform size with 11 inches diameter. The soil used was always sterilised before mixing the spores. The variety of Sorghum used was Co. 5 throughout the experiment as this was susceptible and of

short duration and was not season bound. The plants were examined in the boot leaf stage and the diseased ones were carefully removed without allowing the spores to fall on the soil in the pot. In the experiments where successive crops were raised in the same pots an interval of one week was allowed between the harvest of one crop and sowing of the succeeding one.

Experimental results: Viability of the spores: The germination of the spores collected and stored in the laboratory was tested at monthly intervals for over one year. The results are tabulated below. The material was collected on 8th September 1949 and germination counts were continued for one year.

TABLE 1.
Germination tests at monthly intervals

Date of testing	Percentage of germination	Date of testing	Percentage of germination
8-9-1949	0.8	8-3-1950	0.3
8-10-1949	0.9	8-4-1950	0.5
8-11-1949	1.6	8-5-1950	0.2
8-12-1949	1.8	8-6-1950	...
8-1-1950	1.2	8-7-1950	0.2
8-2-1950	0.6	8-8-1950	...

(Average counts of over three thousand spores were made in each case)

The results indicate that the spores under laboratory conditions remain viable for over ten months. However the germination is limited and the maximum obtained at any time was less than two per cent.

Infection studies: The soil in pots up to a depth of two inches was thoroughly mixed with the spores of the smut and the seeds of Sorghum were sown at the rate of ten seeds per pot. The plants grew up normally. When the ears were formed it was observed that six per cent of the plants were smutted while the rest were free. In the control pots where no spores were added there was no incidence of smut. The results indicated that infection takes place through the spores present in the soil.

In order to find out the effect of the spore load on the intensity of infection, the soil was mixed with weighed quantities of

spores and three levels of sporeload were used. The quantities of spores used per pot were 2 gm. 4 gm. or 8 gm. respectively. The spores were mixed with the top three inches of soil and the seeds were sown immediately. The experiment was carried out in two seasons and the results of infection are given below :—

TABLE 2
Spore Load and Infection

Date of sowing	Date of harvest	2 gm.		4 gm.		8 gm.	
		No. of plants present	No. infected	No. of plants present	No. infected	No. of plants present	No. infected
16-6-1949	8-10-1949	59	3	59	14	58	12
17-10-1949	22-1-1950	54	3	58	19	55	9

Higher infection was evident where the spore load was raised to 4 gm. per pot but there was no improvement in the intensity of infection with still higher spore loads. Four grams per pot appeared to be the optimum spore load.

Survival of the fungus: The duration of time during which the soil once mixed with the spores remains infective was next determined. The soil in the pot was mixed with four grams of spores per pot. Later, seeds were sown. When the ears were formed the crop was harvested. After a lapse of a week fresh sowings were made in the same pots. Thus successive crops were raised to find out the length of time the soil remained infective. The results are recorded below :—

TABLE 3.
Survival of the fungus in the soil
The soil was inoculated on 16-6-1949.

Date of sowing	Date of harvest	No. of plants present	No. infected
16-6-1949	10-10-1949	60	4
17-10-1949	9-2-1950	59	18
16-2-1950	6-6-1950	60	3
15-6-1950	3-10-1950	59	—
10-10-1950	7-2-1951	60	—
15-2-1951	11-6-1951	60	—

The controls were all healthy. The maximum infection was obtained in the second crop i.e., four months after the initial inoculation of the soil. The fungus does not appear to survive in the soil beyond one year.

In another series of experiment the pots were all inoculated with the same spore load on 10th September 1949. The inoculated pots were kept in the open in the potculture house. Sowings were made in different sets of pots at monthly intervals to find out how long the spores remain viable in the soil when no crop is raised in pot. The results obtained are given below :—

TABLE 4.
Time of sowing and intensity of infection

Date of sowing	No. of plants present	No. infected
10-9-1949	97	7
10-10-1949	97	9
10-11-1949	100	8
10-12-1949	97	11
10-1-1950	100	17
10-2-1950	96	8
10-3-1950	98	6
10-4-1950	96	2
10-5-1950	99	—
10-6-1950	100	—
10-7-1950	97	—
10-8-1950	100	—

It is seen from the results that sowings after eight months are not affected by the smut.

Discussion: These studies have revealed that the spores do not freely germinate. The percentage of germination is very low but takes place even when the spores are fresh.

The improvement with age is not very pronounced. Butler (1918) has stated that a few may germinate each time a rain falls but others will be still alive till the next crop is sown. Under laboratory conditions the spores retain their viability only for a year and all evidences go to show that the same may happen in the field

also. But this period is more than the interval between two crops. The fact that three successive crops were infected with one inoculation shows the capacity of the spores to retain their viability even under the conditions of cultivation. This smut is found to be on the increase in certain areas in Coimbatore district. The studies have shown that the intensity of infection increases with the increase of spore load up to a certain extent. The increase in the incidence of the disease should be attributed to successive showers of spores falling on the soil from infected plants in each cropping season.

The only two courses open for the control of this disease which exhibits soil-borne infection are the eradication of the smutted ears in order to prevent the increase of the spore load in the soil or to cultivate resistant varieties of Sorghum. The variety 'Milo' is reported to be resistant. Further tests with the different varieties of Sorghum available in our state are necessary to find out suitable resistant strains. Co. 5 is susceptible. Till such time when resistant varieties are available it is necessary to concentrate on the eradication of smutted ears as the main method of control.

I am highly indebted to Sri T. S. Ramakrishnan for his valuable guidance in carrying out these experiments. I am also thankful to Sri M. Kandaswamy, Government Mycologist, in charge, for his helpful criticisms in the preparation of this paper.

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Research Notes.

Influence of Boron on Potato Yields

Certain minor elements like chlorine, magnesium, iron, manganese, boron etc., are reported to influence crop yields, when supplied in limited amounts.

Reports on the effects of boron on the yield of potatoes are conflicting. While Smith and Nash (4), working on sand cultures, found that lack of boron resulted in adverse yields, Wallace (5) has reported that application as borax, at 20 lb. per acre, induced toxicity. No effects of addition of borax were evident on the Cumberland Plateau of Tennessee from the work of Ora Smith (3), though Dunkley and Midgley (1) discovered a marked response in boron deficient podzol top soils. Eaton (2) found that nutrient solutions containing one p. p. m. of boron gave increased yields of tubers.

This note reports the trials conducted at the Agricultural Research Station, Nanjanad, to study the effects of boron, applied as borax mixed with the Nanjanad mixture at planting.

Five treatments were provided in the above replicated trials, consisting of No Borax, (Control) and borax at 5, 10, 20 and 30 lb. per acre, and these were carried over ten crop seasons as follows:

1947	1948	1949	1950
1. Main crop	3. Irrigated crop	6. Irrigated crop	9. Irrigated crop
2. Second crop	4. Main crop	7. Main crop	10. Main crop
	5. Second crop	8. Second crop	

Treatment differences for yields were significant only in the seasons (1), (3), (5) and (9) above but, even in these four cases the results were not conclusive, since in no case did the application of borax give significantly higher yields over 'Control'. Even in regard to the four different levels of borax applied, there was no consistent relationship between these levels and the yields for the various seasons. In general, the effects of borax were not clear, nor did its applications prove useful.

The results recorded have been extracted from the Annual Station Reports of the Agricultural Department, relate to the period 1947 - '50, and form the work of the staff who were engaged in the studies. This is gratefully acknowledged.

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Agri. Research Station,
Nanjanad. }

M. D. AZARIAH and
K. SAPTHARISHI.

Influence of seed weight on the yeild of Elephant Yam (*Amorphophallus companulatus*)

Introduction : In the cultivation of crops, other factors being equal, the seed weight has been found to remarkably influence the yield. In paddy the heavy and well filled seeds of the short duration types are found to be better yielding than light and partially filled seeds. The influence of seed weight upon yield is, perhaps, more spectacular in the case of tuber crops. Work done at the Nanjanad Agricultural Research Station has shown that yield in potato increased considerably with increase in the seed weight.

Previous Work : References have been made by many to the cultivation aspect of yam but little or no work appears to have been done on the effect of seed weight upon the yield in this. In order to find out if the experimental observations recorded in the other tuber crops applied equally well to yam and if so, to find out the optimum economic size of seed to be used for planting the present experiment was taken up for trial.

Materials and Methods : Whole yams were cut to obtain seed material of $\frac{1}{2}$ lb., 1 lb., $1\frac{1}{2}$ lb. and 2 lb. bits taking care to see that each one of these contained a portion of the central core, the formative region giving rise to the vegetative buds. These were planted in May 1951 in randomised replications. The crop received the normal cultural operations and was harvested after two years and the yield recorded.

During the growth of yam in the above experiment it was observed that plants with a heavier seed weight were distinctly more vigorous in growth than those from the lighter seeds. In order to find out whether there existed any correlation between the vegetative growth and the weight of seed planted, height and girth measurements in the above experiment were recorded after six months from planting.

Results : The summary of results for yield and growth development are presented in tables I and II below.

TABLE I.
Seed weight and yield of plants

Particulars of treatment	Seed Weights				General mean	S. E.	'Z' test satisfied or not	D. C. (0.05)
	$\frac{1}{2}$ lb. (control)	1 lb.	$1\frac{1}{2}$ lb.	2 lb.				
Acre yield in lb.	5040	6720	9280	11,440	8120	872.9	Yes	1859.5
% on control	100.0	133.3	184.1	227	161.1	17.32		35.91
Conclusion: 1 2 3 4								

TABLE II.
Seed weight and growth of plant

Treatments (weight of seed material planted)							
$\frac{1}{2}$ lb.		1 lb.		$1\frac{1}{2}$ lb.		2 lb.	
Height	Girth	Height	Girth	Height	Girth	Height	Girth
11.5"	2.5"	13.6"	3.6"	16.3"	4"	18"	5"

The yield data on analysis are found to satisfy the 'Z' test. The highest seed weight, namely 2 lb. has recorded the maximum yield of 11,440 lb. per acre giving 127% significantly higher yield over $\frac{1}{2}$ lb. seed weight (Control).

Growth data recorded in table II indicate a progressive increase in the shoot development with increase in seed weight.

Discussion : It will be seen from table I that there is a progressive increase in the yield of yam with the increase in the weight of the seed used for planting. Though the initial outlay may be slightly higher it is advantageous to use at least $1\frac{1}{2}$ lb. seed for planting.

Planted on the same date and under similar conditions of plant growth it may be safe to correlate good yield with good shoot development. This might also help to postpone the harvest of a particular plant to the succeeding year in case its vegetative growth is comparatively poor.

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Agricultural Research Station,
Pattambi. }

P. UTTAMAN,
K. V. A. BAVAPPA.

The Manganese Content of Madras Soils

Introduction: Manganese is one of the Trace or Minor elements essential for good crop production. The element appears to be related to chlorophyll formation and hence to carbon assimilation and photo synthesis. It has an important role in the assimilation of nitrogen by plants and its translocation within them. In animal nutrition manganese is an essential part of many enzymes and has a significant bearing on the process of assimilation.

Most crops and plants require manganese for best growth. But the quantity required is small and under normal conditions many soils are able to supply this quantity. So the importance of the element in plant nutrition often escapes notice. But under alkaline conditions and with heavy application of lime to correct acidity, soils are not able to provide even the very small amount of the available nutrient required and plants suffer from various chlorotic and other diseases. In acid soils, on the other hand, manganese becomes readily available and the excess absorbed leads to various disorders.

Manganese in the right proportion is therefore very important in crop husbandry. Very little is known about the manganese status of Madras soils. In the present note data for the total manganese in the soils and sub-soils of the different climatic zones of the state as represented by the Agricultural Research stations, are given. The soil prepared in the laboratory and passed through the 2 mm. sieve is used for the estimation. The procedure may not be alright for exchangeable manganese as shown by Boken (1952) but is satisfactory for total manganese. The element is extracted from the soil by digestion with sodium sulphite in 2-4 normal sulphuric acid and oxidised to Permanganate with sodium bismuthate in the presence of mercuric oxide. The Permanganate obtained in this way is estimated in a Spekker Absorptiometer using spectrum filter 602 blue. The colour of the permanganate should be read off as quickly as possible, preferably within one hour of its formation. Where the colour of Permanganate is very light, 4,4'-tetra methyl diamino triphenyl methane may be used to intensify the colour.

Method for the Estimation of Total Manganese in Soils: 10 gm. of the air-dry soil are mixed intimately with 8-10 gm. of sodium sulphite and 100 cc. of 4N. sulphuric acid are added. The mixture is boiled on a hot plate for half-an-hour with occasional stirring. It is then quantitatively transferred to a 250 cc. flask and made up to the mark. After mixing thoroughly it is filtered through a dry filter and 25 cc. of the clear filtrate are taken for the estimation of manganese. To the aliquot are added 15 cc. of 4N. sulphuric acid, 2 gm. of mercuric oxide and 0.5 gm. of sodium bismuthate and the whole is boiled on a hot plate for about 15 minutes.

A further quantity of 0.5 gm. of sodium bismuthate is added and boiled again to ensure the complete oxidation of the manganese. The solution is then filtered off and the residue washed to remove all traces of permanganate. The filtrate and washings are collected in a 100 cc. measuring flask and made up to the mark. After mixing thoroughly the depth of the permanganate colour is measured in a Spekker Absorptiometer using Spectrum filter No. 602-blue.

A standard curve is prepared for manganese by taking known amounts of the element and obtaining the corresponding absorptiometer readings after oxidation to permanganate as indicated above. The curve is drawn with the absorptiometer reading and the corresponding amounts of manganese on the two axes. For the preparation of the standard 0.2878 gm. of pure dry potassium permanganate is dissolved in about 250 cc. of water. 20 cc. of strong sulphuric acid are added to the solution and the permanganate reduced to manganous salt by the careful addition of sodium metabisulphite in small quantities. The excess of the reducing agent is removed by the addition of a small amount of nitric acid. After cooling the solution is made up to 1 litre. Each cc. of the solution contains 0.1 mgm. of manganese. Different volumes of the solution are used for preparing the standard curve. The standard curve obtained is a straight line. With it the permanganate present in soils can be directly read off from the absorptiometer readings.

The Manganese Content of Madras Soils: The following table gives the manganese present in the typical soils of Madras.

No.	Soils, Locality and Depth	Total Manganese Milligrams per 100 gm. of air dry soil
1.	Black soil, Koilpatti	99.54
2.	" "	101.4
3.	" "	98.93
4.	" Madurai—(Paddy land)	40.44
5.	Paddy soil (Wet land) Coimbatore	51.12
6.	" "	49.79
7.	Red soil Koilpatti	72.78
8.	" "	57.49
9.	" Coimbatore	31.11
10.	" "	31.11
11.	Alluvium Pattukottai	25.51
12.	" "	54.30
13.	" Aduthurai	83.33
14.	" "	91.24
15.	Sandy loam, Palur	40.44

No.	Soils, Locality and Depth			Total Manganese Milligrams per 100 gm. of air dry soil
16.	"	"	6-12"	57.88
17.	"	Tirurkuppam	0-9"	28.03
18.	"	"	9-18"	39.02
19.	Laterite soil Pattambi			15.46
20.	"	"	9-18"	15.46
21.	"	Mangalore	0-9"	15.46

From the results it is seen that soils formed under semi-arid conditions such as the soils of Koilpatti, Coimbatore, Palur and Tirurkuppam contain much more manganese than the heavily leached soils of the West Coast (Pattambi and Mangalore). Even in the same locality soils which are cultivated under wet conditions (Paddy soils) contain much less manganese than those under garden cultivation. So the black soil of Koilpatti in all depths is richer in manganese than the black paddy soils of Madurai. The alluvial soils contain manganese in varying proportions depending upon the nature of the alluvium, the leaching to which it has been subjected and other factors. The alluvium of Pattukottai contains less manganese than that of Aduthurai. The manganese content of black and red soils differ considerably probably because of the parent material from which they are derived.

The surface soil generally contains slightly less manganese than the top soil. This is probably because of the leaching to which the surface soil is subject. Along with other salts manganese might have been washed away or carried to the lower depths. However, in the heavily leached laterite soils of the West Coast there is no difference in total manganese between the top soil and the subsoil. It is difficult to understand the higher manganese content of the Koilpatti red soil as compared with the subsoil.

Summary: The manganese content of soils can be estimated by extraction with sodium bisulphite in the presence of 2 to 4N sulphuric acid and the oxidation of the clear extract in sulphuric acid medium with sodium bismuthate. Chlorides that may be present in the soil may be eliminated by the addition of mercuric oxide to the mixture. The permanganate produced by the oxidation of the manganese of the soil may be measured in the Spekter Absorptiometer using spectrum filter No. 602-blue. The manganese may be read off from a standard curve prepared for the element.

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Chemistry Section,
Agrl. Research Institute, }
Coimbatore.

P. K. R. MENON.
T. RAJAGOPALA IYENGAR.

OBITUARY

Sri M. P. Kunhikutty, Assistant Marketing Officer, (Retd.) passed away at his residence at Tellichery on March 31st 1955 at the age of 64.

He was one of the early pioneers in livestock work in Madras State and worked both in Coimbatore and Hosur. Later, in 1935 he was appointed as Assistant Marketing Officer, Madras and was put in charge of the work of survey and development of livestock products. He has to his credit a number of market surveys on a variety of livestock and livestock products, such as cattle, sheep and goats, eggs, milk, hides and skins and has done outstanding work in the grading of livestock products.

Possessed of a sincere and modest temperament, he was a cheerful and helpful worker and had many friends in the department and outside.

May his soul rest in peace.

GLEANINGS

Built in Geiger Counters: The lowly flea, caught up willy-nilly in the atomic age, had not come unprepared for survival. Water fleas (Cladocera), it seems, are able to detect gamma radiation and will hurriedly evacuate any area in which it is present. So far as can be determined by the University of Michigan workers who first noted the phenomenon, this is the first known instance of a living organism being able to detect radiation by sensory perception. We poor humans, of course, must resort to Geiger counters and the like.

(Chemical and Engineering News. 32, 2940, 1954) [A. M. K.]

Adjusting Lambing Period Reduces Strain on Ewes: The practice of obtaining two crops of lambs commonly followed by Shepherds has been found to be harmful. Ewes dropping lambs twice a year do not get a chance to develop fully nor will their lambs have good growth. The additional fodder requirements cannot be had through grazing alone. Apart from this, the Shepherd loses in other ways. Male lambs, not being of uniform size, fetch a lower price in the market. The wool clip, not being uniform also will be of a low value. The excessive strain on the ewes will make them fail to breed. Livestock experts therefore, recommend only one crop of lambs in a year. They advise that lambing should be so adjusted that it coincides with the time when the grazing is in plenty, which will mean less strain on the ewes. Lambing can also be adjusted to when the climate becomes more temperate. When once the favourable lambing season is decided on it will be easy to fix the mating season. (I. C. A. R. Farm News Release No. 35)

Pest Damage to Grain in Storage — Latest Methods for Complete Control: Research on methods of controlling insect pests on grain stored in large quantities for food or for seed point to simple chemical methods that assure an almost complete control of the pests. Insects, along with other pests, are responsible for causing losses amounting to about 25,00,000 tons of grain every year in this country. Measures adopted to save this grain from pest damage will go a long way in saving food for the nation. Entomologists recommend that the grain after harvest and before storing should be thoroughly dried because grain which is fully dried is not favourable to the breeding or growth of the insects. They also prescribe light fumigation with a fumigant like chlorosol. This is available in liquid form, but vapourises on exposure to air. The fumigation is done by covering the stored grain under an air-proof cloth and pouring the liquid in a shallow dish kept on the top of the grain. The liquid is applied at 4 lb. per 100 maunds of the grain. The grain is kept exposed to the fumes for 24 hours. Grain stored for seed should be dressed with 10 per cent D. D. T. dust at the rate of 2 ounces per 125 lb. of grain. Research at the Indian Agricultural Research Institute, New Delhi, has shown that such a treatment will not interfere with the germination of the grain.

(I. C. A. R. Farm News Release No. 36)

Ensuring Right Flavour in Papaya — Simple Precaution in Harvesting and Packing: The practice of plucking papaya fruits in an unripe condition and allowing them to ripen in storage is not a desirable practice. This results in the fruits losing in their flavour and taste. The right time for plucking these fruits is when they have just developed some yellow spots. The fruits should be plucked with the hand and stored in a dry place, covered with a gunny bag or in straw. It is advisable that the fruits are kept in a single layer. To get fruits of a good quality and of uniform size, farmers should thin out the fruits on the tree in the early stages. At the most, 15 to 18 fruits should be retained on a tree. Carefully packed fruit will stand long journeys well and remain fresh. Ordinary Bamboo or cane baskets can be used, and a bedding of straw may be spread in the basket as

well as between layers of fruits. More than three layers in a basket are not advisable. Large-sized fruits should form the bottom layers. The basket may be covered with a gunny and stitched. (I. C. A. R. Farm News Release No. 38)

Rice Responds to Nitrogen — Ten to Hundred per cent Increase in Yield: An extensive series of experiments conducted by the Central Rice Research Institute, Cuttack, has shown that rice can give increased yields from 10 to 100 per cent with the application of nitrogen in one form or the other. It has been found that ammonium sulphate is the most satisfactory fertilizer for rice. It contains 20 per cent nitrogen and is immediately available to the plants. Experiments have also shown that on moderately fertile soils about 100 to 200 pounds of ammonium sulphate is best. Beyond 200 lb. it is not economical.

(I. C. A. R. Farm News Release No. 39)

Checking Fruit Fly Damage — Destruction of Fallen Fruits: The heaping up of fallen fruits or those unfit for the market in a corner of the garden is a harmful practice. Such heaps attract fruit flies by the sweet smell coming out of the fruits. An infected fruit is a source of further spread of the pest. As such, all attacked or fallen fruits should be destroyed by burying them two feet deep and ramming soil over them. If this is not possible, all discarded fruits should be boiled in water for an hour before throwing them away. Picking also should be done clean. Under developed fruits or small fruits should not be left over on the trees. Spraying with diesel oil solution, consisting of one gallon diesel oil, one pound of soft soap and one gallon of water diluted eight times gives a very good control over mango flies.

(I. C. A. R. Farm News Release No. 40)

Healthy Setts for Seed — Keeping Down Borer Damage: A careful examination of the cane used for preparing setts for planting, rejecting those with holes, is one simple way of checking the shoot borer which does a great deal of damage to the crop when it is growing up. The pest, at first, is seen feeding on sugarcane leaves, but later bores into the stem killing the central shoot in young sugarcane. In grown up cane, the pest bores holes out of which froth will ooze. Great havoc is caused to sugarcane when the pest attack is severe. When pest infection is high, light traps should be set up in the field. This will trap and kill adult borer. Giving two light earthings during the early stages of the crop and discontinuance of ratooning are other suggested methods to reduce pest damage.

(I. C. A. R. Farm News Release No. 42)

IN LIGHTER VEIN

A Dairy wishing to advertise its product paraded through the town a stunt artist from the local circus under the banner. "This dare devil drinks our milk" The rival Dairy without incurring any expenditure simply paraded a placard with the inscription "You dont have to be a daredevil to drink our milk".

Weather Review — For the month of March, 1955.

RAINFALL DATA (IN INCHES)

Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January	Division	Station	Total for the month	Departure from normal	Total since 1st January
North	Madras (Meenam-bakkam)	0.0	- 0.3	4.6	South	Madurai	0.6	- 0.1	0.9
	Tirur-kuppam*	0.0	- 0.2	4.9		Pamban	0.2	- 0.5	6.1
	Vellore	0.0	- 0.3	1.8		Koilpatti*	2.5	+ 1.2	5.1
	Gudiyatham*	0.0	- 0.3	1.8		Palayam-cottai	0.3	- 0.7	2.2
East Coast	Palur*	0.0	- 0.5	2.6	West Coast	Amba-samudram*	1.4	- 1.5	6.3
	Tindivanam*	0.0	- 0.7	0.5		Trivandrum	2.1	+ 0.6	2.9
	Cuddalore	0.0	- 0.7	1.9		Fort Cochin	0.7	- 1.3	1.7
	Naga-pattinam	Tr.	- 0.8	3.5		Pattambi*	0.1	- 0.8	0.1
	Aduturai*	0.0	- 0.6	1.5		Kozhikode	0.5	+ 0.1	0.9
	Pattukottai*	0.0	- 1.2	3.2		Taliparamba*	0.4	+ 0.1	0.4
Central	Salem	1.3	+ 0.8	1.4	Hills	Wynaad*	3.6	+ 0.6	3.6
	Coimbatore (A. M. O.)*	0.0	- 0.3	0.3		Nileshwar*	0.2	- 0.2	0.2
	Coimbatore	0.0	- 0.5	0.6		Pilicode*	0.0	- 0.4	0.0
	Tiruchirappalli	Tr.	- 0.4	1.0		Mangalore	Tr.	- 0.5	Tr.
						Kankanady*	0.0	- 0.5	0.0
						Kodaikanal	1.9	+ 0.1	4.3
						Coonoor*	2.0	- 1.5	6.9
						Ootacamund*	1.0	£	2.0
						Nanjanad*	1.0	- 0.1	1.7

Note:—1. * Meteorological Stations of the Madras Agric. Dept.
 2. Tr. = Trace (0.01" to 0.04")
 4. £ = Actual deviation is 0.01".

The month began with a marked upper air discontinuity at 3,000 ft. above sea level over Tiruchirappalli. The weather was practically dry during the first three days. On 4-3-1955 thundershowers occurred at a number of places in interior Tamilnad. On the next day also a few localised showers were received in Tamilnad. In the succeeding two days weather was mainly dry. Again on 8-3-1955 thundershowers were received at a few places in South Tamilnad. Travancore-Cochin received a few localised showers on the next day. From 10-3-1955 to 22-3-1955 the weather was practically dry throughout the State with mild variations in the day and night temperatures. For a week from 23-3-1955 thundershowers were received in some portion or other of the Madras State or Travancore-Cochin or Mysore area. Majority of the showers received during this period happened to be highly localised in nature. The weather was mainly dry in the last two days of the month.

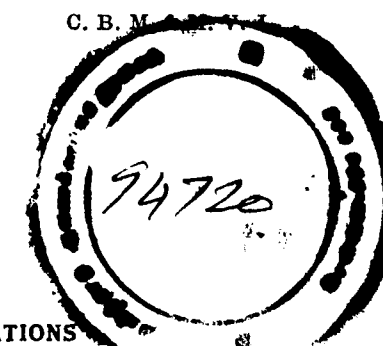
In short, the rainfall in March 1955 remained practically sub-normal throughout the States barring a few solitary exceptions. Consequently the summer conditions were felt as severe practically throughout the State. Water table is going low and scarcity for even drinking water is felt in some taluks of dry districts.

The note-worthy rainfalls and the zonal rainfall in inches are furnished hereunder:

Note-worthy Rainfalls			Zonal Rainfall			
Date	Name of Place	Rain-fall	Name of Zone	Av. rainfall for Dec.	Dep. from normal	Remarks
4/3/55	Salem	1.3	North	0.0	- 0.3	Below normal
8/3/55	Tuticorin	1.8	East Coast	0.0	- 0.8	do.
25/3/55	Alleppey	3.0	Central	0.3	- 0.1	do.
25/3/55	Kodaikanal	1.0	South	1.0	- 0.3	do.
27/3/55	Trivandrum	1.0	West Coast	0.8	- 0.2	do.
			Hills	1.5	- 0.4	do.

Agricultural Meteorology Section,
 Lawley Road P. O.,
 Coimbatore, 7-4-1955.

C. B. M.



DEPARTMENTAL NOTIFICATIONS

Gazetted Service — Postings and Transfers

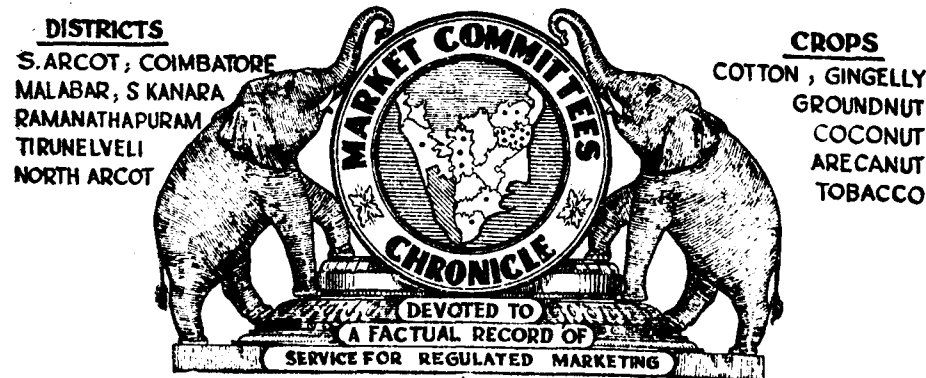
Names and Present post	Posted as
Albuquerque, S. D. S., Asst. in Oil Seeds,	Supdt. A. R. S., Nileshwar.
Ananda Padmanabha Pillai, Principal, G. S. T. Centre., (Basic) Bhavanisagar,	Principal, G. S. T. Centre., (Extension), Bhavanisagar.
Appaji, V. K., D. A. O., Vellore,	Gazetted Asst. to D. A., Madras.
Francis, T. S., Regional Dy. Director of Agriculture, Madurai,	Asst. Marketing Officer, Coimbatore.
Krishnamurthy, R., A. C. S., Coimbatore,	Asst. Cotton Extension Officer, Coimbatore.

Name and present post	Posted as
Kannian, K., Asst. Cotton Specialist, Coimbatore,	Addl. Supdt. C. F., Coimbatore.
Natarajan, T., Gazetted Asst. to D. A., Madras,	Administrative Officer, Agricultural College, Coimbatore.
Narayan Nair, K., (On leave)	Secretary, Coimbatore Market Committee.
Parthasarathy, S. V., Sugarcane Agronomist, Gudiyattam,	Sugarcane Specialist, Palur.
Rajagopalan, N. S., D. A. O., Tirunelvely,	D. A. O., Vellore.
Ramachandran, S. V., D. A. O., Vellore,	Asst. Marketing Officer, Madras.
Santhanakrishnan, B., Asst. Marketing Officer, Madras,	D. A. O., Tirunelvely.
Thirumalacharya, N. C., (D. A. O., On leave)	Spl. D. A. O., Crop Sampling, Vellore.

Upper Subordinates — Postings and Transfers

Names and Present post	Posted as
Anantaraman, P. V., Asst. in Paddy, Coimbatore,	Asst. in Chemistry, Coimbatore.
Anantachari, P. S., A. D., Perungathur,	P. A., to D. A. O., Vellore.
Adyanthayya, Mycology Asst. Vittal,	Mycology Asst. Coimbatore.
Abdul Lateef, A. D., Rajapalayam,	A. D., M. Reddiarpatty.
Athmarama Iyer, P. S., Marketing Asst. Tanjore,	S. D. A., Pattukottai.
Balasubramaniam, K. R., S. D. A., Tanjore,	A. D., T. Kallupatty, Madurai.
Balakrishnan, S., Paddy Asst. Pattambi,	F. M., Ambalavayil.
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Ganapathy, K. V.,	A. D., Karipatty, Salem.
Gopalakrishnan, P. K., F. M., Ambalavayil,	Asst. Vegetables, Coimbatore.
Krishnamurthy, P. S., A. D., Uthukottai,	A. D., Vegetables, Madras.

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Lakshmi Ramakrishnan, Asst. in Myco., Coimbatore,	Asst. in Tuber Crops, Coimbatore.
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Arecanut (*Areca Catechu*) in South Kanara — a few broad aspects of its quality

by

K. TEJAPPA SHETTY,
Secretary, South Kanara Market Committee, Mangalore

Arecanut (Betelnut) being essentially a cross fertilised palm, it is but natural that a number of types varying mainly in shape, size and colour of nuts are met with in the same area. Yet it is seen that regional variations in types are mostly maintained because no large scale attempts have ever been made to replace the existing types by any well-planned selection work. The types of arecanuts grown in the Malnad areas like Mundaje of this district are of a smaller type than those grown in Badiaka centre of Kasaragod taluk. The produce of North Malabar which is brought to Mangalore market is generally found to be much inferior to the produce of South Kanara mainly because of the smaller type of nuts grown there. It is therefore seen that the data regarding various aspects of this crop differ widely not only between different regions but also within different gardens in the same region and even between trees in the same garden.

The following data are the result of the enquiries conducted by the author and are also based on the data collected at the Arecanut Research Station, Vittal. They give fair idea of the variations found in this crop in a normal year :

	Minimum	Maximum	Average
1. Total No. of trees in a garden ...	500	1200	650
2. Total No. of bearing trees in a garden ...	300	650	400

	Minimum	Maximum	Average
3. Total No. of bunches per palm ...	1	6	2.4
4. Total No. of nuts per bunch ...	30	400	95
5. Total No. of nuts per tree ...	—	—	210
6. Total No. of ripe arecanuts (raw) per pound ...	10	25	14
7. Total No. of dry arecanuts (with husk) per pound ...	30	80	35
8. Total No. of cured and husked nuts per pound ...	52	110	60
9. Percentage of husked nuts to the total dry unhusked nuts ...	—	—	60
10. Percentage of husk to dry unhusked nut ...	—	—	40
11. Yield by the number of nuts per acre ...	30,000	2,00,000	78,000
12. Yield of "Gotu" (sundried whole husked nuts) per acre ...	280 lb.	3360 lb.	1250 lb.

Note: The "Gotu" is separated into "Biligotu" that is superior white nuts — 96.5% and "Koka", that is inferior dark nuts — 3.5% before sending the same to the market.

13. Price of "Biligotu" per cwt.	Rs. 128	Rs. 148	Rs. 140
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From the above data it may be seen that there is a wide variation not only in the yield of the individual trees and gardens but also in the market prices of the commodity depending upon the locality where it is grown and the type of nuts. There is thus large scope for the improvement of this crop to increase both the yield and quality of nuts. Though the "Chali" (sundried whole nuts) type of nuts of South Kanara are found to be superior to the nuts of any other area, there is still further scope to improve the quality to get uniformly good nuts which may help largely in fetching the fair average price, reducing the wide range of variations in prices as seen at present. Very useful basic data on this crop are being collected at present at the Arecanut Research Station at Vittal and it is hoped that the Central Arecanut Research Station will try to tackle most of these problems when it starts its work.

Note on the Market Conditions on the Notified Commercial Crops During March 1955

I. Groundnut: South Arcot Market Committee: Arrivals of groundnut kernels in all the eight regulated markets amounted to 2,736 tons during the month. Tindivanam, Vridhachalam and Tirukoilur markets registered the largest arrivals in the order indicated. Prices of groundnut kernels opened at Rs. 97—2—0 per candy (531 lb.), improved gradually to Rs. 98—10—0 in the middle of the month and closed lower at Rs. 96—8—0. Local crushers were the main buyers and the export demand for oil was reported to be restricted.

North Arcot Market Committee: Arrivals of groundnut kernels into the regulated markets of North Arcot Market Committee were only 56 bags of 177 lb. each or 4.5 tons nearly. The prices of groundnut kernels in North Arcot district ruled around Rs. 89—9—0 per candy of 531 lb.

II. Gingelly: The arrivals of gingelly were confined to only the five markets of South Arcot district (i. e.) Vridhachalam, Tirukoilur, Cuddalore O. T., Villupuram and Tindivanam and amounted to 1,758 bags of two maunds (82—2/7 lb.) each during the month. The prices of Gingelly which opened at Rs. 36—1—0, per bag of 2 maunds each, improved to Rs. 41—9—0 and later receded to Rs. 35—5—0, a level lower than the opening rates.

III. Cotton: The arrivals of cotton to Tiruppur market were as furnished below:

Lint 245 candies (each 784 lb.)
Kappas 26,841 pothis (each 280 lb.)

Prices of Cambodia and Karunganni Cotton, both lint and kappas ruled at rates given below at a few important market centres in the notified areas.

(Amount in Rs. Quantity: Lint per candy of 784 lb. Kapas per pothi of 280 lb.)

Markets	Cambodia		Karunganni	
	Lint	Kapas	Lint	Kapas
Tiruppur	861—891	100—106/8	700	79/80
Uganda				
	Certified	Uncertified		
Kovilpatti	1100—1150	950—980	720	92/10
Virudunagar	1126	1087	691—720	77/3—81/6

IV. Coconut: The coconut market in Malabar opened with a carryover of 6,261 thousand nuts and accounted for 8,482 thousands nuts

Market Committees Chronicle

under new arrivals. Disposals (both as local sales and despatches) amounted to 9,042 thousand nuts leaving a closing stock of 701 thousand nuts. The demand for North Indian Markets was encouraging throughout the month.

In addition to an opening balance of 2,000 candies (700 lb each) of copra heavy arrivals were received amounting to 3,690 candies during the month. Of the above 3,075 candies were disposed of leaving a carry over of 2,615 candies. There was good demand from local millers for milling copra.

Prices of coconuts in Malabar markets ranged from Rs. 115—130 per thousand nuts during the month. Copra rates stood at Rs. 260—280 per candy for Office variety Rs. 270—280 for Edible variety and Rs. 360—375 for Madras variety and Rs. 400—425 for Rajpur variety.

Prices of coconut in South Kanara district ranged from Rs. 150—160 for raw moist nuts and Rs. 170—195 for dry nuts per thousand and for copra, rates ruled at Rs. 270—290 per candy of 660 lb.

V. Arecanut: Arrivals were meagre in Malabar being off season while they were heavy in Mangalore. Estimated arrivals and disposals both in Malabar and South Kanara districts were as follows:—

	Opening balance.	Receipts.	Despatches.	Local sales.	Closing balance.
Malabar (in bags of 100 lb) each ..	695	300	292	50	653
South Kanara (in cwts) ..	9,101	39,000	37,481	..	10,628

The prices of Arecanut both in Malabar and South Kanara Districts were as follows:—

	Opening.	Closing.
(South Kanara Dist.)	Rs.	Rs.
Koka	.. 65—105	93—115
Choll	.. No Stock.	No Stock.
Malabar Supari	.. 115—130	130—145
Mangalore Supari	.. 128—148	140—170
(Malabar Dist.)		
Choor		170—190

IV. Tobacco: It is estimated that the size of tobacco crop in 1954—55 in Coimbatore district will be about 40,0000 candies and the quality of the new crop is also expected to be satisfactory. The total despatches of chewing varieties amounted to 805 candies and the destinations were Palghat, Vellore, Tirupattoor, Madras, Quilon and Madurai. The available stocks consisted of only chewing tobacco and is put at

8418 candies in Coimbatore district. The prices indicated a sagging tendency. The prices of Tobacco of various grades were as given below:—

Price per candy of 500 lb.		Chewing Varieties.	
		Meenampalayam.	Palladam.
		Rs.	Rs.
I quality	..	450—500	200—220
II quality	..	300—400	120—150
III quality	..	200—280	80—95

Activities of the Market Committees during the month of March 1955.

I. Five of the Seven Market Committees in the districts of North Arcot, South Arcot, Coimbatore, Malabar and South Kanara were functioning normally while the stalemate in the Committees of Ramnathapuram and Tirunelveli districts continued to prevail due to certain legal difficulties. Government have sanctioned the opening of two markets by the Malabar Market Committee, one at Thalakkadathur (for coconuts and arecanuts) and the other at Kuttipuram (for cured arecanut) with provision for refusal of licences or renewal of old licences for the purchase and sale of the respective commodities within a radius of 5 miles from the limits of the above markets.

The following progress was made by the market committees during the month in the issue of licenses under Section 5 of the Madras Commercial Crops Markets Act.

Committees	Sec. 5(1)		Sec. 5(3)		Weighmen		Broker	
	A	B	A	B	A	B	A	B
North Arcot								
Market Committee	144	542	53	262	43	228	2	7
South Arcot								
Market Committee	161	846	184	992	67	402	1	2
Tirunelveli								
Market Committee	...	36	...	15	...	17	...	...
Coimbatore								
Market Committee								
South Kanara								
Market Committee	37	134	22	113	4	18	...	5
Malabar								
Market Committee	8	86	52	180	5	132	...	9

A:— During the month

B:— Upto the end of the month

The total of transactions in commercial crops in all the regulated markets in the State, during March, 1955 is as follows:—

Crop	Quantity	No. of Regulated Markets
Groundnut kernels	2673.5 Tons	10
Gingelly	1288 bags*	5
Cotton Lint	912 candies**	1
„ Kapas	26841 Pothies***	1

* One bag = 2 Indian Standard Maund

** One candy = 784 lb.

*** One pothi = 280 lb.

II. **Meetings:** One meeting each in the committees of North Arcot and Malabar districts were held besides a special sub committee meeting of Malabar Market Committee. The North Arcot Market Committee decided to request the Government to notify Jaggery and Chillies as Commercial crops in North Arcot District under Madras Commercial Crops Markets Act. The subjects tabled by other Market Committees were of routine nature. In the North Arcot Market Committee, the members appointed at the inception laid down their office at the end of the month and the Collector of North Arcot assumed the powers of the Committee as per Section 6-A of the Madras Commercial Crops Act, 1933.

III. **Special features:** During the month North Arcot Market Committee held a refresher course followed by an examination for the benefit of field staff dealing on the salient features of the provisions of the Madras Commercial Crops Markets Act, Madras Commercial Crops Markets Rules and the By-laws of the Committee.

IV. **Quality appraisal:** During the month a total of 608 samples of groundnut kernels were drawn from the arrivals into the five regulated markets of South Arcot Market Committee from 6,946 lots comprising of 2,505 tons and analysed for an objective study into the qualities of groundnut kernels.

[From The State Marketing Officer, Madras.]

MARKET NOTES AND PRICES

1. The range of market prices for the month of March 1955:—

For the week ending	Areca nut				Copra per candy of 660 lb.	Coconuts per 1000 nuts
	Koka Rs.	Choli Rs.	Malabar supari Rs.	Mangalore supari Rs.		
3—3—1955	65 to 105	No stock	115 to 130	128 to 148	270 to 295	R. 150 to 170 D. 170 to 230
10—3—1955	65 to 110	do.	115 to 132	130 to 152	260 to 280	R. 150 to 170 D. 170 to 225
17—3—1955	75 to 115	do.	125 to 140	140 to 171	250 to 265	R. 140 to 165 D. 195 to 200
24—3—1955	95 to 115	do.	125 to 140	140 to 165	250 to 260	R. 140 to 165 D. 165 to 200
31—3—1955	95 to 115	do.	130 to 145	140 to 170	250 to 260	R. 140 to 160 D. 160 to 195

R. = Raw.

D. = Dry.

2. The estimated stocks held and exports ("SUPARI") :—

Opening Balance Cwt.	Receipts Cwt.	Exports Cwt.	Closing Balance Cwt.
9,109	39,000	37,481	10,628

The price of "Supari" improved steadily during the month by about Rs. 20/- per Cwt. and remained practically steady at this higher level during the latter half of the month, with good demand and large exports. Price of copra which showed an improvement during the previous month, declined by Rs. 35/- per candy during the month and remained steady at this lower level. There was sudden fall in the price of coconuts by over Rs. 40/- per 1000 nuts and the market continued to be weak.

Mangalore, }
5—4—1955. }

Secretary,
South Kanara Market Committee.

CROP AND TRADE REPORTS

Potato—First Forecast Report—1954—'55—Madras State: Potato is grown mainly in the Nilgiris district and to a small extent in the districts of Salem and Madurai. The area under the winter crop upto 25th December 1954 is estimated at 1350 acres as against 1100 acres estimated for the corresponding period of the last year, representing an increase of 22.7 per cent. The yield per acre is expected to be normal in the districts of Salem, Madurai and Nilgiris. The wholesale price of potato per maund of 82 2/7 lb. or 3200 tolas on 15—1—1955 was Rs. 13/- at Mettupalayam which is the same as that which prevailed during the corresponding period of last year.

Mesta—Second Forecast Report—1954—'55—Madras State: Mesta (Habiscus Cannabinus) is grown in the districts of North Arcot, Coimbatore, Tiruchirapalli, Tanjore, Madurai and Tirunelveli and the area sown with the crop during 1954—'55 is estimated at 910 acres. Compared with the area of 620 acres estimated for the corresponding period of the previous year, this is an increase of 46.8 per cent,

An increase in area is estimated in the districts of North Arcot, Coimbatore, Tiruchirapalli, Madurai and Tirunelveli and the area is the same as that of the last year in the district of Tanjore. The seasonal factor for the State as a whole works out to 98 per cent of the normal as against 95 estimated for the previous year. On this basis, the total yield in term of dry fibre works out to 1,680 bales of 400 lb. as against 1,110 bales, estimated for the corresponding period of the previous year, representing an increase of 51.4 per cent.

Gingelly—Third Forecast Report—1954—'55—Madras State: The area sown with sesamum (gingelly) crop in the Madras State upto 25th December 1954 is estimated at 343,500 acres. Compared with the area of 346,000 acres estimated for the corresponding period of the previous year and the average area of 315,700 acres for the five years ending with 1953—'54, the present estimate reveals a decrease of 0.7 per cent and an increase of 8.8 per cent respectively. A decrease in area is estimated in the districts of Chingleput, Salem and Madurai and an increase in all the other districts except North Arcot, Tirunelveli and South Kanara where the area estimated is the same as that of the previous year. The variations are marked in the districts of Chingleput (—3,000 acres), Salem (—5,090 acres) and Coimbatore (+3000 acres). Gingelly is a negligible crop in the Nilgiris district. The main crop has been harvested. The yield per acre is expected to be normal in Salem and Tanjore districts and slightly below normal in all the other districts of the State. The condition factor for the State as a whole works out to 97% of the normal as against 95% in the corresponding report of the previous year. On this basis, the total yield is estimated at 43,600 tons. Compared with the yield of 43,200 tons estimated for the corresponding period of last year and the average yield of 35,800 tons for the five years ending with 1953—'54, the present estimate reveals an increase of 0.9 per cent and 21.8 per cent respectively. The average wholesale price of gingelly seed per standard maund of 82 2/7 lbs. as reported from important market centres on 8—1—1955 was Rs. 25—0—0 at Tirunelveli, Rs. 21—0—0 at Tiruchirapalli and Salem, Rs. 20—9—0 at Cuddalore and Rs. 20—0—0 at Tuticorin. Compared with the prices prevailed on 9—1—1954 these reveal a fall of 10.7% at Tirunelveli, 20.8% at Tiruchirapalli 23.1% at Cuddalore, 34.6% at Salem and 40.3% at Tuticorin.

Groundnut—Fourth or Final Forecast Report—1954—'55—Madras State: The area sown with groundnut in the Madras State upto December 1954 is estimated at 1,625,000 acres. Compared with the area of 1,444,700 acres according to the figures as per the Season and Crop Report for the previous year (provisional) the present estimate reveals an increase of 12.5 per cent. As compared with the average area of 1,783,300 acres calculated for the five years ended 1953—'54, the current year's estimate shows a decrease of 158,300 acres or 8.9 per cent. The area under the crop in South Kanara and the Nilgiris districts is negligible. A decrease in area is estimated in the districts of Chingleput and Tirunelveli districts and an increase in area in all the other districts of the State. The harvesting of winter or main crop is proceeding. The yield per acre is expected to be below normal in all the districts of the State. The Seasonal Factor for the State as a whole works out to 94 per cent of the normal as against 97 per cent estimated for the previous year. On this basis, the total yield in terms of unshelled nuts is estimated at 763,600 tons as against 697,700 tons for the previous year according to the provisional figures as per the Season and Crop Report, representing an increase of 9.4 per cent. The present estimate is also an increase of 5.8 per cent as compared with the average yield of 721,800 tons (unshelled nuts) calculated for the five years ended with 1953—'54. The wholesale price of groundnut (machine shelled) per standard maund of 82 2/7 lb. or 3200 tolas as reported from certain important markets centres on 8—1—1955 was Rs. 14—13—0 at Vellore, Rs. 14—15—0 at Erode,

Rs. 15-7-0 at Salem, Rs. 16-4-0 at Cuddalore and Rs. 17-0-0 at Coimbatore. Compared with the prices which prevailed during the corresponding period of the previous year, the current prices reveal a fall of 34.0 per cent at Cuddalore, 36.4 per cent at Coimbatore, 39.1 per cent at Vellore, 39.6 per cent at Salem and 41.3 per cent at Erode.

Cotton - Fourth forecast report - 1954-'55 - Madras State: The area sown with Cotton in the Madras State upto 25th January 1955 is estimated at 768,200 acres. Compared with the area of 755,300 acres estimated for the corresponding period of last year and an average area of 709,200 acres calculated for the five years ending 1953-'54, this is an increase of 1.7 per cent and 8.3 per cent respectively. The area estimated is the same as that of last year in the districts of Chingleput, North Arcot, Tiruchirappalli, and South Kanara. A decrease in area is estimated in the districts of South Arcot and Tanjore and an increase in the other districts of the State except in the Nilgiris district where the area under Cotton is little or negligible. Pickings of Cotton crop are in progress in the districts of Salem and Madurai. The crop is reported to have been affected by insect pest in the district of Coimbatore. The yield per acre is expected to be normal in the districts of South Arcot, Salem, Tanjore, Malabar and South Kanara 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 in last year. It is, however, too early to estimate the yield with accuracy as the harvest has not commenced in the major portion of the area and much will depend upon the future weather conditions in the districts. The total yield works out to 252,600 bales of 392 lb. lint as against 244,400 bales of 392 lb. lint for the previous year and an average yield of 224,500 bales for the five years ending with 1953-'54, representing an increase of 3.4 per cent and 12.5 per cent respectively. The average wholesale-price cotton lint per maund of 82 2/7 lb. or 3.200 tolas as reported from important market centres on 5th February 1955 was Rs. 97-1-0 for Coimbatore Cambodia, Rs. 83-15-0 for Coimbatore Karunganni and Rs. 70-14-0 for Tirunelveli at Madurai compared with the prices during the corresponding period of the previous year, these prices show a fall of 11.8 per cent in the case of Tirunelveli, at Madurai, 6.0 per cent in the case of Coimbatore Karunganni and 1.9 per cent in the case of Coimbatore Cambodia.

Redgram - Second Forecast Report 1954-'55 - Madras State: The area sown with Redgram in Madras State upto 25th December 1954 is estimated at 161,500 acres. Compared with area of 163,400 acres estimated for the corresponding period of last year, this is a decrease of 1.2 per cent. The crop is mainly grown in the districts of South Arcot, North Arcot, Salem, Coimbatore and Tiruchirappalli. A decrease in area is estimated in the districts of Coimbatore, Tanjore, Madurai and Tirunelveli and the area is the same as that of last year in the other districts except in North Arcot, Tiruchirappalli and South Kanara where an increase is estimated. The area under the crop in the Nilgiris district is little or negligible. The crop has been harvested in most of the districts. The yield per acre is expected to be normal in the districts of Tanjore and slightly below the normal in the other districts of the State. The Seasonal Factor for the State as a whole works out to 97 per cent of the normal which is the same as that for last year. On this basis the total yield works out to 23,400 tons of cleaned grain as against 23,000 tons of cleaned grain for the corresponding period of last year representing a decrease of 1.7 per cent. The average wholesale price of redgram dhall per maund, or 82 2/7 lb. or 3.200 tolas on 8th January 1955 was Rs. 16-8-0 in Tirunelveli. Compared with the price which prevailed on 9-1-1954, this shows a decrease of 28 per cent.

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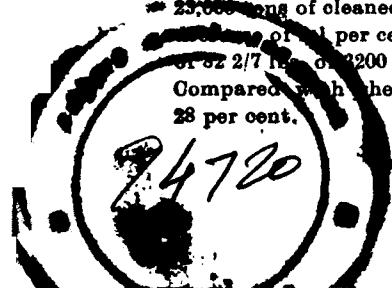
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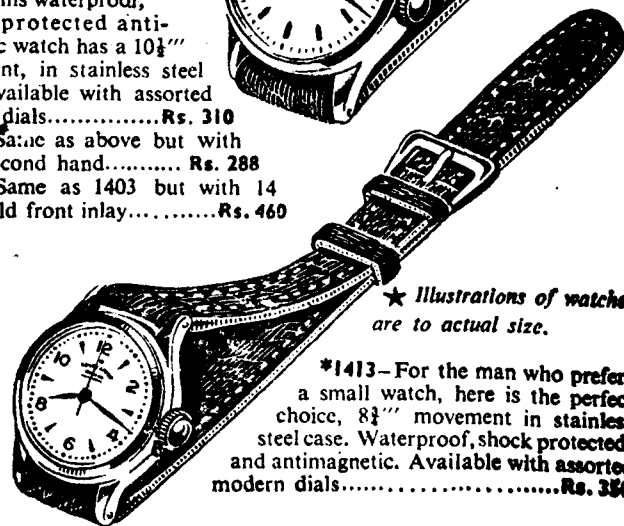
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