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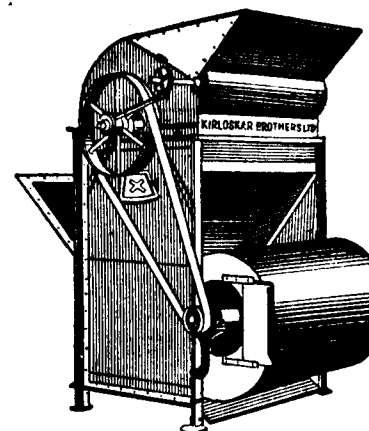
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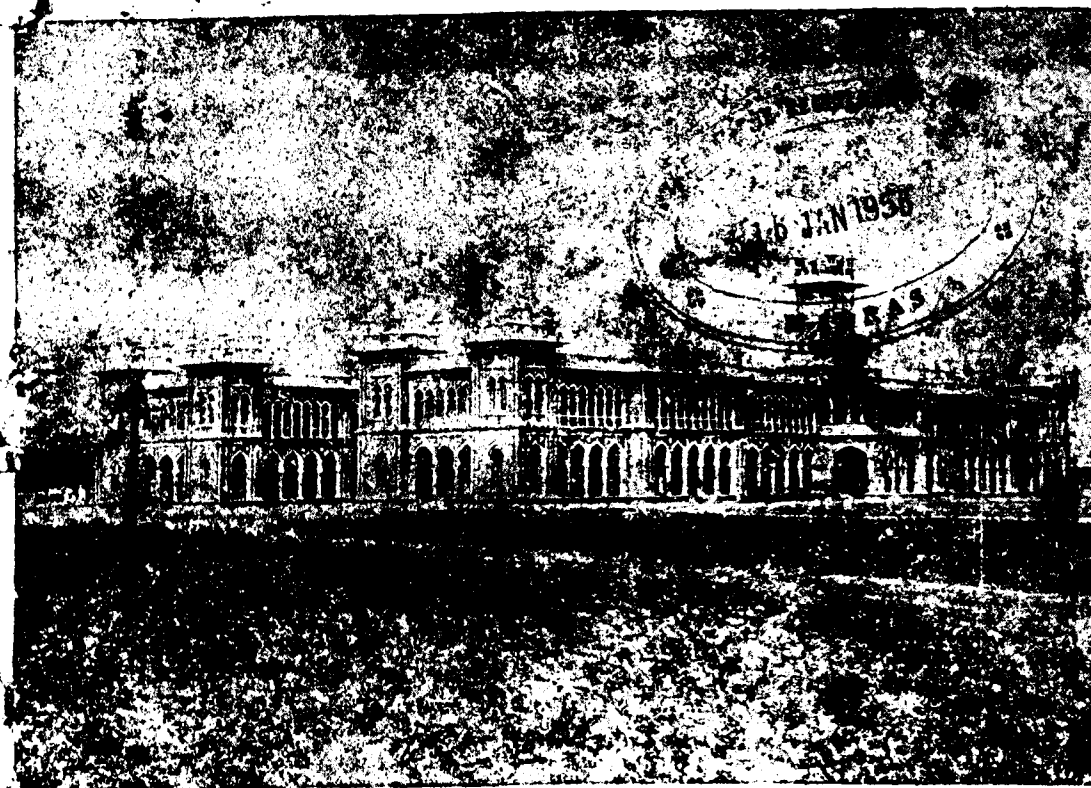
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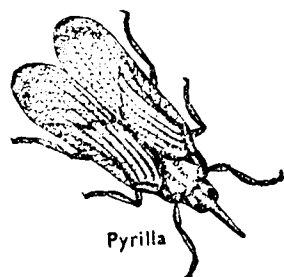
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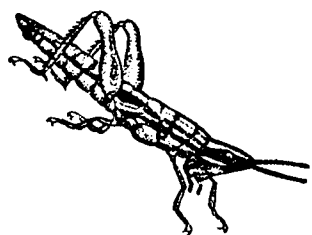
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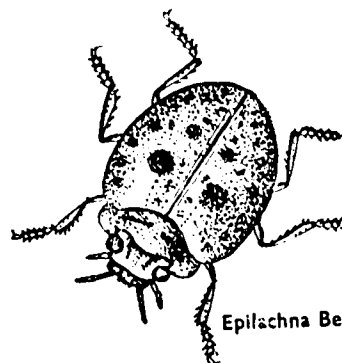
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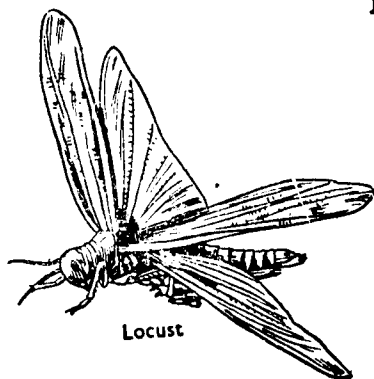
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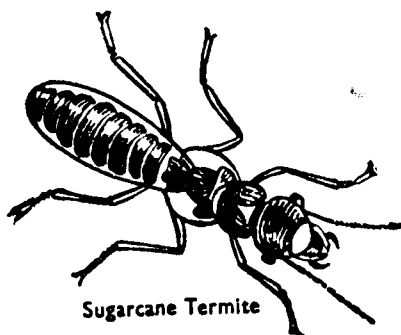


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Editorial

An appeal to our readers: It is well-known that editors are a much-maligned lot, but most of them, at least in their lucid intervals, have got only the interest of their readers uppermost in their minds. And it goes without saying that the best test of the reader's interest in any periodical lies in the volume of correspondence coming on to the Editor's desk and the contributions that come in for publication in the periodical. Judged by this test, it has to be confessed that a certain degree of imbalance appears to exist in the contributions that are received nowadays for publication in the Madras Agricultural Journal. As the very name indicates, the journal is intended to serve the needs of all those interested in Agriculture, both by way of supplying scientific information to agricultural workers and serving as a medium for the exchange of agricultural knowledge between different regions in Madras State. Though the journal can claim that it has been and still is fulfilling the former need, at least within the limitations that still persist, the latter aspect seems to need a great deal of improvement. For this improvement, it is only our readers and members of the Madras Agricultural Students' Union who can help, by sending in larger numbers, short notes or articles on all matters of agricultural interest. It is inconceivable that in such a vast field as agriculture, there should be any dearth of interesting material, provided the desire is present, to make known the information available to a larger circle. A review of the previous volumes of the Madras Agricultural Journal shows that in the earlier years, a much larger proportion of the contributions used to come from workers in the districts than is the case now. It is immaterial to enquire whether this shift in the relative proportion of contributions from the research and the extension wings is due to the latter

being entrusted now with many more items of work than in the earlier years, or whether the research people are better placed in regard to the collection and presentation of information in a form that is readily acceptable for publication. Whatever the reasons might be, it is very desirable that the balance should be rectified as much as possible. With this end in view an appeal is now made to all our readers and well-wishers to send in as many contributions as possible, for publication in the Madras Agricultural Journal. These contributions need not necessarily be in the form of full-fledged "original articles", but may include any item of interest, of peculiar agricultural practices that are current in different regions, new ideas, or suggestions to improve existing practices or information regarding new uses of familiar plants, implements or chemicals. In fact, it may be said that the field of choice need have no limitations at all but might cover any or all items that are likely to be of interest to workers in practical agriculture and in the agricultural sciences.

It is hoped that a larger number of such notes would be forthcoming during the next year for publication in our Journal.

Price of Groundnuts in North Arcot District

by

S. K. SRIRAMAN, B. Sc., (Ag.) M. Sc.

Introduction : The fruits of the tropical to sub-tropical annual plant "*Arachis hypogea*" are popularly called the "Groundnuts" or "Earthnuts" as the nuts mature under the ground surface. The kernels inside the pods resemble peas and hence are also termed as "peanuts". There is yet another name for this, as "Monkey nuts" since monkeys in zoos, are fed by the spectators with these nuts. This last name has really assumed more significance of late, because of the rapid fluctuations in the prices of the same. The prices are as varying and erratic as the actions of a monkey. The month-war prices of groundnuts in North Arcot district are given in statement I appended, from 1935 onwards. A glance at the figures reveals that the trend of groundnut prices for the past twenty years has been a story by itself, full of interest and excitement.

Price Fluctuations : The price of groundnuts ruled round about Rs. 30 to 40 before World War II. What was only Rs. 25 per candy of 531 lb. groundnut kernels (shelled) at the beginning of the war in 1939, began to move up gradually and reached nearly rupees one hundred at the end of the war in 1946. In the post-war boom period, the prices shot up and aided by other conditions like the Korean war, groundnuts were sold at Rs. 220/- by 1951. There was a rapid decline in 1952, reaching Rs. 120/-. Again due to drought conditions, the prices spurted up to Rs. 230/- in 1953. Thereafter the story took a sad turn, and the prices declined rapidly month after month. The downward march continues still and it is time that the various factors responsible for the price structure of groundnuts are studied. The results of a preliminary survey of facts in North Arcot are presented in this article for focussing attention on the various aspects of this important problem.

Market Price : Many economists have tried to solve the riddle of determining the value of a commodity and yet the forecast of the value of a commodity, is in practice rather difficult. There were many old theories regarding value. The labour theory and the Marxian theory of value, stressed that the value of a commodity was determined by the amount of labour embodied or expended in it. The value was recognised later in terms of the cost of production. The utility

Income :

Haulms $1\frac{1}{2}$ cartloads (used for feeding cattle.) ...	8	0	0
15 bags of dried groundnut pods are obtained from one acre. (1 bag = 80 lb.)			

Note: The bunch variety, which is rapidly spreading in this district, replacing the spreading variety of groundnut, requires 40 M.M. of seeds instead of 30 M.M. and for harvesting would require only 15 women instead of 25 women. The yield is only about 12 bags instead of 15 bags. In all other respects, the cultivation expenses are the same.

Thus the cost of cultivation of groundnuts works out to Rs. 80/- per 15 bags of dry pods or Rs. 16/- per bag of kernels (equivalent to three bags of dry pods).

Market expenses and price-spread: Next to the cost of production, let us estimate the marketing expenses. The traders in this district, purchase groundnuts from the producers either through brokers or commission agents. The main marketing season for groundnuts is between September to December every year. The prices during these months are naturally lower, as can be seen from the monthly averages given in Statement I. However, during some periods, because of other factors like the war, the prices did not vary according to the season (Statement I).

The pods purchased from the growers are dried and decorticated before being sold as kernels to the exporters or the oil crushers. A study of the "price spread" of groundnuts, would give us an insight into the marketing expenses to be incurred. Here again, because of the various deviations in the method of marketing groundnuts, the working out of the "price spread" is difficult. A rough idea is given below, taking into consideration the majority of conditions in North Arcot district.

Price-spread from producer to consumer in the marketing of groundnuts in North Arcot district.

(a) Purchases by itinerant merchants :

	For one bag of 177 lb. groundnut kernels.	
		Rs. A. P.
Producer's price for $3\frac{1}{2}$ bags of wet pods (64 M.M. each) at the village farm at Rs. 8/- per bag of wet pods ...	28	5 0

Note: $3\frac{1}{2}$ bags of (64 M.M. each, weighing roughly 100 lb.) wet pods 3 bags (80 lbs. each) of dry pods and will yield 1 bag (177 lb.) of kernels.

Price of Groundnuts in North Arcot District 531

Cost of drying and bagging the pods ...	0	5	0
Handling and cartage charges from village to assembling centre from a place roughly 5 miles distant ...	0	12	0
Decortivating charges to get 1 bag of kernels ...	0	6	0
Weighing and stitching charges at the decorticator, for one bag of kernels ...	0	1	0
Margin for the itinerant merchant ...	1	0	0
Value realised by the itinerant merchant ...	30	8	0

(b) Sales through a commission mundy :

Rs. A. P.

Commission at Rs. 0—0—6 per bag of kernels (after the advent of the marketing regulation under the Madras Commercial Crops Markets Act) ...	0	2	6
or			
Commission at Rs. 0—0—6 per rupee and other charges from buyer (before the advent of the regulation) ...	1	0	0
Weighing and handling charges ...	0	1	0
Sales tax to be paid by the purchaser ...	0	8	0
Levy to the market committee ...	0	1	6
Transport to the purchaser's godown ...	0	1	0
Total cost for the consumer-exporter or the oil-mill owners before regulation under the Madras Commercial Crops Markets Act ...	32	3	6
After regulation under the Madras Commercial Crops Markets Act ...	31	6	0

(c) Sales through the regulated markets directly by the growers :

Rs. A. P.

Cost of drying and bagging the pods (own labour) nominal, ...	0	4	10
Handling and cartage charges from village to the regulated market, which is mostly his own (labour) nominal cost. ...	0	8	0
Decortivating charges ...	0	6	0
Handling charges at the regulated market (weighing free) ...	0	0	8
Levy to be paid to the Market Committee by the purchaser. ...	0	1	6

Transport charges to the purchaser's godowns	...	0	1	0
The producer receives for his 3½ bags of wet pods-nett	...	30	0	0
Total cost for the consumer in North Arcot district	...	31	6	0

Only small quantities are utilised in this district for crushing into oil. Out of a normal production of 1 lakh tons of kernels in North Arcot district 85,000 tons are available for marketing either for crushing into oil or for export. The oil-crushing capacity of the existing installations in this district is roughly 72,000 tons kernels, while the actual quantity crushed is only about 20,000 tons. Thus, in spite of having facilities for developing a good oil-crushing industry in this district the shyness of capital, the vagaries of the kernel prices, and the absence of parity between the prices of kernels and oil, has undermined the oil-milling industry in this district. Hence nearly 65,000 tons are exported, mostly to the nearby milling centres in South Arcot district or to the exporting centre, Madras.

(d) *Expenses for export to Madras from North Arcot district.*

	Per bag of 177 lb. kernels	
	Rs.	A. P.
Lorry hire charges (about 75 miles)	...	1 0 0
Expenses for the party at Madras	...	0 6 0
Commission at 1%	...	0 6 0
Weighing, handling and stitching charges at Madras	...	0 3 0
Sales tax paid by the purchaser at Rs. 0—0—3 per rupee	...	0 8 0
Total	...	2 7 0
Consumer's cost at Madras after regulation	...	33 13 0

The above price-spread data reveal that out of Rs. 33—13—0 the producer in North Arcot district receives only Rs. 28— when he disposes it off through the brokers and commission mundies under the present conditions of regulation of groundnut trade in North

Arcot district under the Madras Commercial Crops Markets Act. If the producer sells his produce through the nearest regulated market, he gets Rs. 30—0—0 out of the consumer's price of Rs. 33—13—0 per bag (177 lbs.) of kernels. Thus nearly 89% of the consumer's rupee goes to the share of the producer, if he should market his produce directly through the regulated markets, while he gets only 83%, if it is sold through brokers and commission agents. The case was still worse, before the regulation of trade, when the producer got only 81% of the consumer's rupee as his share. Nearly two and a half rupees are lost per bag of kernels transported to Madras. This can be saved, if utilised within the district, by crushing into oil. Nearly two rupees more per bag of kernels is realised by the producer, if he should market his produce through the regulated markets instead of the commission mundies in North Arcot district itself. Hence, there is scope for improving the price paid to the grower in North Arcot district. The producer when encouraged, would naturally try to produce more and more. Finally the price-spread data reveal that the expenses of marketing are Rs. 0—14—0 within North Arcot district and Rs. 2—7—0 for sale at Madras, which amounts to Rs. 3—5—0 per bag of 177 lb. kernels.

Parity Price: Groundnut is the money crop for the dryland cultivator in this district and only one crop of groundnut is raised between July to October. The other crops like Cholan raised by him during the other seasons are used for domestic consumption. Hence, the ryot depends upon the groundnut crop for meeting his capital expenses, for marriages or death ceremonies or for purchasing his cloth and other requirements. These factors also have to be considered, along with the cost of cultivation and marketing expenses for determining the price of groundnuts. A dryland ryot of North Arcot district normally cultivates about four acres of groundnuts per annum, and allowing for his capital expenses of about Rs. 300/- per annum the extra value of groundnuts per bag of kernels works out to Rs. 5/-. Hence the value of groundnuts should be about rupees one hundred per candy of 531 lbs. of kernels (3 bags). The present price of ninety rupees is low and the ryots are naturally disappointed. This will have its own repercussions on the succeeding crop of groundnuts, whose area may be less. Hence, unless the price of groundnuts is maintained at about the level of rupees one hundred per candy of kernels, the incentive to produce groundnuts on a large scale may be hampered.

Supply and Demand: After the considering of the cost of production and marketing expenses, the supply and demand position should be examined to get at the reason for the fluctuation in prices. The prices in North Arcot district closely follow the prices at Madras as there is very little utilisation and consumption of groundnuts locally. In the pre-war years, before 1939, the Madras prices used to be largely influenced by the buying limits of the chief exporting firms like the East Asiatic, Louis Dreyfuss, Rallies etc., and as these were based on the London prices, there was generally close sympathy between the movement of prices at Madras and London. The London price for groundnuts used to move parallel to those of several other edible oilseeds and oils. The control over the exports, the expansion of the oil-crushing industry in Madras State and the establishment of the Vanaspathi manufacturing factories in India, upset the prices in India itself, and the prices at London, the hub of the World groundnut trade, no longer continued to be the deciding factor for the prices of groundnuts in Madras during and after the World War II. Of late, owing to the dearth of capital and over-production, the prices in India have tended to follow the London market once again. Hence, the supply position of not only groundnuts but also other oilseeds like castor, copra and gingelly is vital in the decision of the groundnut prices. The Indian crop alone does not compete, as other countries also have of late begun to compete in the London market. Hence, the prices fluctuate abnormally.

The meteoric rise in prices during and since the World War II is a phenomenon common to all agricultural products.

Fair Price for Groundnut: The price index number of the groundnut kernels at Vellore (North Arcot district) taking the price in 1938-39 as 100 and the comparison with the price index numbers of other commodities produced in North Arcot district, showing the parity in prices between the various commodities, is given in statement II.

It is found that the price index number of paddy in 1954-55 is 420, while the groundnut pods index is 431 and that of jaggery is only 164. The present price of first sort paddy which is about Rs. 10-8-0 per imperial maund is reported to be just about the economic level and measures are being suggested for stabilising the prices, by fixing floor price just about the present level. Hence, it can be taken as an indication that a price index level of about 420,

would be ideal, for forming an idea of the fair price of the other commodities also. By this standard, the price of groundnut pods should be about Rs. 11/- per bag of 80 lb. At this price, there would be parity between the price of paddy and the groundnut pods. Hence, the fair price of groundnut kernels from this angle also works out to Rs. 100/- per candy of 531 lb. (9 bags of pods.)

Conclusion: Having discussed the reasons for the fluctuation in prices, the remedies, if any for stabilising prices may be thought of. The violent fall in prices at harvest time is a matter of serious consequence to producers. To minimise its effects, co-operative societies and bonded warehouses can be set up for providing storage and finance to the cultivators; and regulated markets can be established for affording proper facilities for marketing their produce at favourable prices and to disseminate market news about prices, stocks and demand. The introduction of organised "futures" trading in the spreading variety, "Coromandel", at Madras would help in bringing the influence of supply, demand and international values, to bear more closely on Madras prices and prove beneficial to producers. Fixation of "floor" and "ceiling" prices at Rs. 100/- and Rs. 150/- respectively per candy of 531 lbs. kernels, may also help in stabilising the prices. Greater use of groundnut oil in India itself for industrial purposes like the manufacture of soaps, cosmetics, and Vanaspathi should be a stabilising factor in the marketing of groundnuts. Provision of improved shipping facilities by the Government of India would further improve marketing conditions. Greater provision of loans on groundnuts by banks, would also stem the fluctuations to a large extent.

STATEMENT I

Price of groundnut kernels in North Arcot District
(Rs. per candy of 531 lbs.)

Pre-war Period

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Year average
1935	39	35	37	40	38	38	39	37	35	36	34	35	37
1936	37	35	35	33	33	35	36	40	30	36	40	40	36
1937	38	38	38	35	35	36	36	39	30	28	25	28	33
1938	27	26	25	25	26	26	27	24	26	22	23	26	26
Month average	35	34	34	33	33	34	35	35	30	31	31	32	

World War II													
1939	25	24	22	23	28	27	28	32	30	29	31	31	28
1940	30	30	30	32	35	36	27	24	22	25	20	19	28
1941	21	18	20	23	24	27	31	34	25	26	31	33	26
1942	32	33	31	32	28	33	43	47	40	50	48	50	39
1943	60	65	75	82	89	90	87	81	82	82	78	75	78
1944	73	70	76	78	71	66	66	69	74	69	63	58	69
1945	63	63	65	54	58	56	65	75	79	74	74	76	67
1946	88	90	90	90	95	92	90	96	96	90	90	92	90
Month average	49	49	51	52	54	53	55	57	56	56	54	54	
Post-war Period													
1947	79	85	110	130	130	125	130	150	140	120	125	132	121
1948	136	130	126	136	136	140	140	144	142	145	142	145	139
1949	145	147	155	165	165	166	170	176	173	170	165	163	163
1950	165	160	170	195	191	190	192	190	185	188	187	200	185
1951	218	211	215	215	220	205	190	182	180	187	172	202	202
1952	170	160	120	130	125	120	120	135	140	151	160	160	140
1953	165	168	180	192	203	230	210	185	166	165	164	160	180
1954	160	156	160	160	148	135	130	125	105	105	99	104	132
Month average	155	153	155	165	164	166	162	162	154	153	154	154	
1955	95	97	94	93	90	90							

Source: Collected from the traders' accounts.

STATEMENT II			
Price Index Nos. for important agricultural commodities in North Arcot District			
Year	Paddy 1st sort	Groundnut pods	Cane Jaggery
1938-'39	100 (Rs. 2-8-0)	100 (Rs. 2-10-0)	100 (Rs. 7-0-0)
1939-'40	108	121	90
1940-'41	122	91	51
1941-'42	135	126	80
1942-'43	180	275	175
1943-'44	265	319	137
1944-'45	213	255	124
1945-'46	270	329	159
1946-'47	260	469	238
1947-'48	275	588	157
1948-'49	1,115	610	204
1949-'50	393	712	334
1950-'51	440	688	314
1951-'52	492	674	200
1952-'53	470	681	253
1953-'54	378	679	275
1954-'55	420 (Rs. 10-8-0)	431 (Rs. 11-5-0)	164 (Rs. 11-8-0)

Base: Year ended June 1953=100.

Effect of indirect manuring on the yield of broadcast Rice in Malabar

by

P. C. SAHADEVAN and T. KALYANIKUTTY
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Introduction: In Malabar for autumn rice, occupying about three lakh acres in double-crop lands, broadcast sowing is the rule in more than 75 per cent of the area. Preparation of the land begins immediately after the harvest of second-crop paddy in January and repeated ploughings are given with the receipt of every summer shower thereafter. The soil is thus brought into a fine tilth before the seeds are sown in April-May, following a soaking rain. This practice precludes raising of a green manure crop on the lands. Other bulky organic manures are also not applied usually, for fear of wash of the added manurial ingredients in the torrential rains of the South-West monsoon. The good tilth that is produced by bringing the soil into a fine state of division by a scrupulous attention to preparatory cultivation, brings in a normal yield, provided the distribution of pre-monsoon showers remains normal. Increased yields are also obtained by top dressing with ammonium sulphate; this practice having come into vogue in recent times.

It will thus be seen that the broadcast crop of autumn rice in Malabar goes without an adequate basal dressing while all the organic manures available in a farmstead are applied to the fields in the second-crop season. A trial was therefore undertaken to find out how far heavy doses of organic matter like green leaf and cattle-manure applied to the second crop would, by way of residual effect, influence the yield of the succeeding broadcast crop in the same fields.

The results of trials carried out at the Agricultural Research Station, Pattambi are outlined in this paper.

Previous work done at the Station: The results of a number of manurial experiments conducted at the station showed that green leaf up to 8,000 lb. did not have any residual effect on the succeeding transplanted crop. In its direct effect green leaf at 5,000 lb. was found to be on a par with cattle manure at 10 tons per acre.

Experimental: The experiment was laid out in split-plot design. Green leaf at 5,000 lb. per acre, cattle manure at 10 tons per acre and 'No manure' were the treatments in the second crop season. For the following broadcast crop, each plot was split for the two

treatments 'Manure' and 'No manure'. The manure consisted of green leaf at 2,000 lb. superphosphate at 150 lb. and ammonium sulphate at 150 lb. per acre. For the transplanted second crop, green leaf and cattle manure were applied a fortnight before planting and for the following broadcast crop, green leaf and superphosphate were applied five days before sowing and ammonium sulphate, two months after sowing. Strain PTB 20 was used for transplanted second crop and strain PTB 2 for the broadcast first crop in all the three seasons. The experiment was commenced in the second-crop season 1950 and concluded in the first-crop season 1953.

The yield data are presented in tables I, II, and III.

It will be seen from the results that in the second crop season cattle manure at 10 tons gave 25.4 per cent increased yield over 'No manure' while green leaf at 5,000 lb. per acre recorded 4.3 per cent increase over that recorded by cattle manure (Table I).

In the first crop season for broadcast crop, an increased yield of 11.2 per cent was recorded by cattle manure as sub-plot treatments (Table II.)

From the figures in table III, it will be seen that cattle manure recorded 22.4 per cent increase by way of residual effect.

Discussion: The results confirm the previous finding that for direct effect a greater bulk of cattle manure than usual is necessary for swamp rice to equal the effect of green leaf at 5,000 lb. per acre and that green leaf had little or no residual effect. The extra cost involved in a heavy application of cattle manure is more than compensated by the remarkable residual effect on the following broadcast crop, resulting in an increased yield of over 20 per cent.

It may be mentioned in this connection that basal manuring of broadcast crop of rice in Malabar has always remained a problem for the cultivator. Previous trials have shown that green leaf could be applied to the soil in the dry state. In the foregoing experiment also, direct manuring of broadcast crop has resulted in an increased yield of about 30 per cent.

But what is found feasible in the case of experimental plots may not lend itself to extensive practice, since green leaves in sufficient quantities become available only after the profuse flush of trees and shrubs during the South-West monsoon period. It is also not

likely that the ryots would give up the practice of broadcasting. More than the non-availability of labour and the resources of the farmers, it is the long-range object of conservation of soil that appears to lie behind this age-long practice. It is a fact that puddling operations carried out during periods of heavy and continuous rainfall result in considerable loss of the fine fractions of soil and organic matter. Transplanting in the first-crop season is therefore confined to low-lying areas where broadcasting will not be possible since one or two showers would be enough to make the soil over-moist, making it impossible to bring it into a friable state. The most appropriate practice would be to manure the transplanted second crop heavily with green leaf and cattle manure for direct and residual effects respectively.

As mentioned already, the cultivators do apply their cattle manure to the second crop, but the quantity available for application is usually too little to be of any residual value. It is here that rural compost looms in importance and its preparation in any quantity would surely benefit the farmer on the West Coast.

Summary: The results of an experiment to find out how far heavy application of organic manures to transplanted crop of rice in the second crop season would influence by residual effect the yield of the following broadcast crop, are presented.

As far as direct effect on swamp rice is concerned it is found that 10 tons of cattle manure have to be applied to equal the effect of 5,000 lb. green leaf, giving an increased yield of about 30 per cent.

Such heavy application of cattle manure leaves a very pronounced residual effect, increasing the yield of the subsequent broadcast crop by about 21 per cent.

The benefit of such heavy applications of cattle manure or compost is explained.

Acknowledgments: Our thanks are due to successive Paddy Specialists at Coimbatore under whose guidance the experiments were conducted.

REFERENCES

1. Madras Agricultural Station Reports 1935 to 36 to 1952 to 53.
2. Abdul Samad, A., and Sahadevan, P. C. (1952) Manuring of rice in Malabar. (The Madras Agricultural Journal, Vol. xxxix, March 1952.)

TABLE I
Pre-season manuring trials

Treatments:

Second crop season.

1. Green leaf at 6,000 lb. per acre.
2. Cattle manure at 10 tons per acre.
3. No manure.

First crop season.

1. Manure: Green leaf at 2,000 lb. superphosphate to supply 30 lb. P_2O_5 — Ammonium sulphate at 150 lb. per acre.
2. No manure.

Layout: 3×4 split-plot design.Plot size: $36.5' \times 32.5'$.

Combined analysis of the Three Second-Crop Seasons' Results

Particulars	Green leaf	Cattle manure	No manure	G. M.	S. E.	'Z' test	C. D. (P=0.05)
Acre yield in lb.	2003	1936	1544	1828	29.98	Satisfied	61
% on control	129.7	125.4	100.0	118.3	1.94		3.93

TABLE II
Combined analysis of the Three First-Crop Seasons' Results

Particulars	Green leaf	Cattle manure	No manure	G. M.	S. E.	'Z' test	C. D. P: 05
Acre yield in lb.	1749	1885	1695	1776	69.2	Satisfied	138
% on control	103.2	111.2	100.0	104.8	4.08		8.16

TABLE III
For Interactions

Particulars	Manure			No manure			G. M.	S. E.	'Z' test	C. D. P: 0.05
	Green manure	Cattle manure	No manure	Green manure	Cattle manure	No manure				
Acre yield in lb.	2057	2114	2038	1441	1655	1353	1776	98.04	Satisfied	196
% on control	152.0	156.3	150.7	106.5	122.4	100	131.3	7.24		14.48

Rhizome Rot and Wilt of Ginger and their Control

by

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Ginger is cultivated on a large scale in Malabar and Godavari districts, the area under this crop being over 12,250 acres. In recent years the price of ginger has risen to such a degree that this crop has assumed great importance. Several diseases affect this crop but the most serious one is the wilt and the rhizome rot caused by more than one species of *Pythium* and *Sclerotium rolfsii* Sacc. The disease affects the harvested rhizomes stored for seed purposes as well as plants in the field. A storage rot occurs in the former and the wilting of the shoots followed by rotting of connected rhizomes is prevalent under field conditions. This disease has been under study by various investigators in many countries (Parham 1935, McRae 1911, Sen 1930, Uppal 1940). Four species of *Pythium* viz. *P. aphanidermatum*, *P. myriotylum*, *P. vexans* and *P. graminicolum* have been found to be capable of causing infection.

Pretreatment of rhizomes with chemicals in order to control the disease was first recommended by Park (1934, 1935, 1937, 1937b) in Ceylon. He found that immersion of seed ginger in 0.1% mercuric chloride solution for two hours either just after harvesting or just before sowing yielded many more plants than untreated seed. Since then these have been tried in other States also. Elaborate experiments were laid out in Malabar during 1938 and succeeding years to find out the effect of various treatments on the incidence and control of storage rot and wilt.

Treatment of rhizomes with Ceresan, Agrosan GN, or mercuric chloride was found effective in preventing storage rot. Treatment of the rhizomes before storage was more useful than treatment at planting time. In some experiments mercuric chloride exerted a depressing effect on the yield of rhizomes, especially when the treatment was carried out twice, once before storage and again before planting. Application of Bordeaux mixture to the soil did not control the disease or affect the yield to any extent (Thomas, 1938, 39, 40, 41, 42, 43, 44).

In 1950 a scheme for the improvement of ginger was sanctioned by the Indian Council of Agricultural Research and was initiated at the Agricultural Research Station, Pattambi. Some of the

experiments included in the programme related to the study of the diseases. The results of the investigation carried out in 1950-'51 on the yield of ginger are recorded in this paper.

Materials and Methods: Seed rhizomes were purchased from ryots for use in these experiments. Many of them were badly affected by *Sclerotium rolfsii*. Apparently healthy rhizomes were selected from among these for the various treatments. In one experiment the soil was treated before planting by pouring a quarter pint of 1% Bordeaux mixture, 0.25% Perenox solution, Cheshunt compound, Colloidal copper or 0.05% of Mercuric chloride solution per planting pit. The treatments were carried out in replicated randomised plots. Storage trials were also conducted to test the effect of immersing the rhizomes in different strengths of Ceresan (wetable) and mercuric chloride solutions for varying periods. Two brands of mercuric chloride were used viz., tablets prepared by May & Baker for agricultural use and the chemical purchased from chemists. The rhizomes were selected, immersed in solutions and dried under shade before pitting.

Results: Effect of soil treatment: The experimental plots were periodically examined to find out the germination percentage and the incidence of diseased shoots. It was found that the highest germination was in the plots treated with colloidal copper and Cheshunt compound. Bordeaux mixture and mercuric chloride application to the soil inhibited germination. The disease was prevalent in all the plots but the highest incidence was in the control where 16% of the shoots were found wilting. The weights of the rhizomes from each treatment were recorded at the time of harvest. The following table gives the results.

TABLE I

Treatments	Germination percentage	Average No. of tillers	% of diseased shoots in the field	Total yield of rhizomes from 5 beds
1% Bordeaux mixture	22.6	9.55	6.6	7.25 lb.
0.25% Perenox	66.0	8.05	11.9	26.50
Colloidal copper	76.6	8.61	10.9	35.25
Cheshunt compound	74.6	8.78	10.5	34.50
0.05% Mercuric chloride	44.0	8.07	5.7	20.76
Control (no treatment)	61.3	8.49	16.0	29.25

The highest yield was recorded from the plots treated with Cheshunt compound and colloidal copper and the lowest from the plots treated with Bordeaux mixture. There was not much difference

between the treatments in the production of tillers per plant. There is an indication in these experiments that drenching the soil with Cheshunt compound or colloidal copper will be useful in increasing the yield. Bordeaux mixture or mercuric chloride solutions cannot be recommended for soil treatment.

Storage experiments: Equal quantities of selected, apparently healthy, rhizomes were treated with different strengths of mercuric chloride (powder and May & Baker tablets) and wettable Ceresan before storage. The rhizomes were immersed in the solutions for varying periods and were stored only after drying in the shade. A long pit 3 feet deep wide at the bottom and 1 foot wide at the top was prepared and divided into 36 compartments for holding rhizomes which were given different treatments.

A plank was kept over the rhizomes which occupied about half the depth of the pit and covered over with earth, making arrangements for ventilation. The pits were filled in December 1950 and the rhizomes taken out and examined in May 1951. The relative quantities of the healthy and the diseased rhizomes are given in the following table.

TABLE II

Treatments	Time of immersion	Quantity stored in pounds	Healthy rhizomes in pounds	Diseased rhizomes in pounds	% of healthy rhizomes
0.1% mercuric chloride (powder)	1½ hrs.	80	60	20	75
0.2% "	45 min.	"	57	23	71
0.4% "	20 min.	"	59	21	74
0.05% Mercuric chloride (M & B) tablets	1½ hrs.	"	60	20	75
0.1% "	45 min.	"	63	17	79
0.2% "	20 min.	"	54	27	68
0.25% Ceresan (wetable)	30 min.	"	65	15	81
0.5% "	15 min.	"	59	21	74
Control (no treatment)	"	"	44	39	55

It is seen from the above table that the treatments have been helpful in reducing the incidence of disease during storage. There was a higher proportion of healthy rhizomes in the treated lots than in the control. This confirms the previous finding that seed treatment with mercuric chloride or Ceresan is useful for preventing storage rot. There was no difference between the May & Baker tablets and ordinary mercuric chloride, but the former is easier to handle.

It must however be stated that the above results represent the first year's observations only. The results during the subsequent years were also in conformity with the first year results.

Acknowledgment: I am thankful to the Government Mycologist for affording all facilities in carrying out the experiments. My thanks are also due to the Superintendent, Agricultural Research Station, Pattambi for rendering help in carrying out the field experiments.

REFERENCES

- Park, M. (1934) Report on the work of the Mycological Division. *Adm. Rep. Div. Agri.* pp. D. 126-D133.
- (1935) Ibid. 1934, pp. D. 124-D. 131.
- (1937)(a) Ibid. 1936, pp. D. 28 D. 35.
- (1937)(b) The seed treatment of Ginger. *Trop. Agriculturist* LXXXIX. I, pp. 3-7.
- Farham, B. E. V. (1935) Annual Report of General Mycological & Botanical work for 1934. *Ann. Bull. Dep. Agri. Fiji.* pp. 55-56.
- McRae, W. (1911) Soft rot of ginger in the Rangpur Dist. Eastern Bengal. *Agric. Jour. India.* Vol. VI. P. II p. 139.
- Son, T. N. (1930) Appendix I. IV Mycology. *Ann. Rep. Dept. of Agric. Assam* for 1929-30. pp. 57-59. Administration reports of the Govt. Mycologist from 1938 to 1944.
- Thomas, K. M. (1940) Appendix K. Summary of the work done under the Plant Pathologist to the Govt. of Bombay, Poona. 1938-39. *Rep. Dep. Agric. Bombay*, 1938-39 pp. 203-211.

Errata

(M. A. J. NOVEMBER 1955)

	For	Read
Page 501. Para 5:	and Rs. 3—8—0 for dressed grades	and Rs. 8—3—0 for dressed grades
Page 504. Tabular Statement. Headings second column:	Indian True Hemp	Italian True Hemp

Addenda et Corrizenda

In the article entitled "The intake of silica by the rice plant, with reference to Blast Disease" by Sri S. Venkatachalam, published in the Madras Agricultural Journal of September 1954, the following acknowledgment is added:

"The author is grateful to the Madras University for awarding a studentship in 1945-'45 for pursuing this investigation."

The article entitled "The Soils of the Lower Bhavani Project area and means of improving their fertility" published in the Madras Agricultural Journal of November 1955, was contributed by the following:

Sri T. Rajagopala Ayyangar, Sri P. Kunhi Raman Menon and Sri M. P. Sankaranarayanan.

Research Notes

A note on *Smithia bigemina* Dalz.—a useful green manure crop

Smithia bigemina Dalz., belongs to the natural order *Leguminosae* and occurs wild in the Anamalais at elevations ranging from 3000 to 4000 feet. It is found to grow mostly over sheet rocks in the midst of swamps in semi-shady as well as open locations. It is also seen to occur occasionally in semi-shady situations along the edges of sholas or in partially open patches in the sholas. The growth in these locations however is found to be less luxuriant than in swamps. A brief description of the plant is given below.

It is an annual, diffuse, 6-12" high, stems and branches very slender, bristly with yellowish hairs.

Leaves abruptly pinnate; rachis 1/8" long, hairy and bristle pointed; petioles very short; stipules scarious, lanceolate, cuspidate, prolonged below their insertion into acuminate or lacerate auricles. Leaflets two pairs, subsessile, 1/8-7/16 by 3/16-18" oblanceolate, cuneate, obtuse and bristle-pointed at the apex, glabrous above, more or less strigose beneath, ciliate.

Flowers 2-8, in copious axillary racemes, crowded towards the tops of the peduncles; peduncles, glabrous longer than the leaves; pedicels very short, hairy, bracts beneath the raceme thinly membranous, oblong, bristle-pointed, glabrous, bracteoles beneath the calyx scarious, ovate lanceolate, bristle-pointed and bristly along the middle rib at the back, half as long as the calyx. Calyx 1/8" long, membranous, with dichotomously branched veins; lips equal, bristly outside, strongly bristled, ciliate on the margins, the upper lip truncate or slightly emarginate, the lower acutely 3-toothed, the middle tooth being the longest. Corolla yellow, twice as long as the calyx. Pods, 6-8 jointed, joints tubercled.

The plant grows very rapidly. It throws out a large number of branches which straggle along the ground and form a thick carpet thereon. The branches produce few or no roots. A fully grown-plant covers an area of about one squire foot. The root system is very fibrous and spreads about sixteen inches. The tap root goes to a depth of about six inches. The roots contain innumerable bacterial nodules.

It flowers during October-November and seeds during December-January. The seeds are minute and difficult to collect. They take 4 to 8 days to germinate. With dry weather the plant gradually dries up leaving a frail cover over the soil. With the onset of rains self-sown seeds germinate in large numbers.

The plant adds a good deal of mulch to the soil and is besides helpful in keeping down growth of weeds, particularly of grass. It has the special advantage that the spreading branches produce few or no roots and therefore it is not likely to compete with the main crop. Further it is tolerant of a certain amount of shade. In view of these features it appears to be suitable for cultivation in young plantations where soil erosion is likely to be considerable. Trials are being carried out to grow it as a cover crop in young Cinchona areas. The first year's trials have been only partially successful. The second year's trials are under way.

The crop is worth a trial in other moist and high elevation localities also.

Acknowledgement: The Government Systematic Botanist and Professor of Botany, Agricultural College, Coimbatore was kind enough to furnish a description of the plant. This crop has been under study by the Propagation Wing of the Govt. Cinchona Plantations, Anamalais, since June 1953. The author wishes to acknowledge these facts with gratitude.

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Propagation Assistant, Cinchona P. O.

Notes and News

We are glad to announce that Sri R. Ramakrishna Naidu of Perianaickenpalayam has become a Patron of the Madras Agricultural Students' Union.

Sri Naidu is an enlightened landlord owning extensive areas both under dry and garden cultivation. A part of the lands where the present Sri Ramakrishna Mission Vidyalaya is situated was donated by him in the cause of education. Though basically a farmer, he devotes considerable time to public activities as well. He was an M. L. C. in the last term of the Madras Legislature. During the lifetime of Sri T. A. Ramalingam Chettiar, he was the Vice-President of the Co-operative Central Bank at Coimbatore and succeeded Sri Chettiar as its President for about six years. Lately he has also become a mill magnate and is the Managing Director of the Palamalai Ranganathar Mills at Perianaickenpalayam. He is a regular visitor to the Agricultural College Day and Conference.

We wish that more and more among the land-holders in our State emulate the example of Sri Naidu and become our patrons and thereby encourage us to be of service to agricultural development in Madras.

An elocution contest was held on 1-12-1955 at Freeman Hall with Sri U. Narasinga Rao as President and Chief Judge. The subject for the contest was "The role of Agricultural Graduates in the Food Problem of Madras". Sri R. Krishnamurthy and Sri U. Sriramulu were selected as the best speakers of the day.

Under the Social Service League of the Students' Club donations were collected for the Tanjore Flood Relief Fund. About Rs. 1000/- and 600 clothes were collected by the students. The Second Year Students went on an educational tour from 3rd December onwards and returned on 17th December 1955. They visited Erode, Kalluppatti, Aduthurai, Dindigul, Madurai, Koilpatti and Tenkasi, and acquainted themselves with the agricultural practices that are in vogue in these areas.



Inauguration of the Village Seed Farm, Seed Exchange for ADT 3 and ADT 20 by the Director of Agriculture, Madras, Sri P. P. I. Vaidyanathan, I. C. S. at Veppathur Village, Kumbakonam, 18th November 1955.

Gleanings

Hybrid Vigour Effects with Cotton: B. G. Christidis. (Journal of Genetics, 53, P. 224-231.) Work carried out in Greece from 1948 to 1953 with a number of cotton varieties indicates that hybrid vigour effects are generally unmistakable. Appreciable yield increases have been obtained with F_1 seed, particularly when the mean of all F_1 hybrids is compared to the parental mean. In comparisons between individual F_1 s and their best parent, the advantage proves far less pronounced. Combining ability differs considerably, according to varieties and seasons. Values for ginning outturn and lint length are generally lower in the F_1 hybrids than in the best parent; however, the few data available for bulk weight suggest an appreciable increase with F_1 seed. In the F_2 generation significant heterotic effects have never been established in favour of the hybrid seed, while the F_3 effects proved definitely unsatisfactory. Yield increases obtained with F_1 seed over the best parent are comparatively small. Hence, in view of the difficulties involved at present in producing hybrid cotton, its use for practical purposes seems to be of limited importance. [T. R. N.]

The Use of Penicillin Wastes as a Fertiliser: L. B. Thrower. (Journal of Agricultural Research, May 1955, p. 432.) Waste mycelium from penicillin production is useful as a fertilizer, but its effect is largely that of other organic materials. *Penicillium chrysogenum* Thom; does not establish itself in the soil and its beneficial influence on soil structure is due to its utilisation as a substrate by rapidly growing Mucorales. Residual, crude penicillin contained in the mycelium may have an effect on the soil bacteria, but it was not effective as a systemic fungicide in water culture experiments. Any influence due to residual penicillin would be of short duration because the antibiotic is unstable at normal temperatures; autolysis of the mycelium is evident after about 24 hours. The mycelial extract has an adverse effect on the germination and growth of tomato seeds, indicating that it contained a plant-growth-substance such as indole-acetic acid. [T. R. N.]

Control of Erosion: The effectiveness of erosion control depends greatly on the establishment and maintenance of suitable vegetation to bind and protect the soil and improve its structure. Rhodes grass (*Chloris gayana* Kunth), first made popular in South Africa by Cecil Rhodes, has been widely used to counter erosion successfully in the northern part of New South Wales. This grass is a tufted, perennial species, with roots that may extend ten to 12 ft. below the surface in deep, loamy soils. It grows fairly in summer, and is thus very suitable for regions with hot, humid, wet summers and mild winters, and an annual rainfall between 22 and 50 inches.

The ability of Rhodes grass to withstand drought is remarkable. At Scone Research Station, New South Wales, during dry periods in summer or autumn it has remained green and actually grown fresh leaf up to six weeks after other traditionally drought-tolerant grasses ceased growing. As a perennial, drought-tolerant, summer-growing species Rhodes grass affords excellent soil protection throughout the year, and especially when storms of great intensity are experienced.

Once established, stolons cover the soil effectively and rapidly stabilise earthworks, waterways and eroded soils, thus minimising the loss of soil and runoff. It will withstand heavy grazing if the stock are removed at certain periods, and will regenerate the structure of soils which have lost their top layers or have been depleted by overcropping. It grows well with legumes to provide nutritious forage, and is responsive to applications of nitrogenous fertilisers.

Rugs don't Raise Milk Yield: Does covering cows with rugs make them give more milk? Experiments conducted by Government agricultural stations in New South Wales, show that rugged cows produce no more milk than when they are unrugged. The only difference noted by animal nutrition researchers was that cows without rugs usually had rougher coats than those that were rugged. No changes in health or body conditions were observed. It is possible, however states an officer of the Veterinary Research Station at Glenfield, New South Wales, that under certain conditions, when cows are underfed or the weather is very cold or where there is little shelter from the wind, rugging may be beneficial.

Record Wool Clip: Production of wool for July 1954-June 1955 in Australia was the highest on record. At 1,288 million lb. it was 6.9 million lb. more than the record for 1952-53. The quantity of wool sold, 3,955,476 bales, was also the highest on record, and its value was £ A 352.6 million. Crossbred wools, were well supported, and their fall in price compared with the previous season was not so great as that of merino wool. Great Britain continued to be Australia's best customer for greasy wool. British purchases at 296.9 million lb. were more than ten million lb. higher than in the previous season.

Japanese purchases registered a big increase from 95 million lb. to 124.7 millions, but Italian purchases dropped from 144 millions to 89 millions. Other big customers were: France 159 million lb.; Belgium 90 million lb.; German Federal Republic 64.5 million lb.; the United States 58.6 million lb. Sales of greasy and scoured wool in each State in bales was: New South Wales 1,380,628; Victoria 1,112,039; Queensland 588,207; South Australia 455,116; Western Australia 347,774; Tasmania 71,712. The number of sheep in Australia on March 31, 1955 was provisionally estimated at 129.96 million, the highest ever recorded and 2.4 per cent more than in 1954.

The State-wise distribution of sheep, in thousands, was:

New South Wales	58,800
Victoria	20,116
Queensland	19,905
Western Australia	13,474
South Australia	12,817
Tasmania	2,586
Australian Commonwealth Territory	238
Northern Territory	29

[Australian News letter]

Manuring Onions in Right Doses: (New Delhi): The onion crop requires a liberal supply of organic manures to yield well. The manure should be applied to the soil well in advance of transplanting. Farmyard manure or green manure should be freely applied to maintain a good physical condition of the soil. Well-rotted farmyard manure should be applied at 10 to 20 tons per acre after the first ploughing so that it may be well mixed with the soil during the subsequent cultivation. The manure can also be applied to the previous crop. Application of commercial fertilizers, particularly those containing nitrogen proves beneficial, especially when farmyard manure has been applied in smaller quantities. Application of six maunds of ammonium sulphate, half at the time of transplanting and the other half one month later, gives good results. Overdoses of artificial fertilizers, however, are to be avoided. They affect the keeping quality of the bulbs, and cause a greater percentage of 'bull necks' in the crop.

[ICAR, New Delhi].

Weather Review — For November, 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 (Meenam-bakkam)	8.0	- 6.0	46.9	South	Madurai	6.5	- 0.8	36.7
	Tirur-kuppam*	5.2	- 2.7	45.3		Pamban	9.0	- 2.7	28.3
	Vellore	2.7	- 5.0	33.0		Koilkatti*	5.0	- 0.3	20.4
	Gudiyatham*	0.9	- 2.4	32.9		Palayam-cottai	11.0	+ 3.6	26.6
East Coast	Palur*	3.5	- 4.9	45.2	West Coast	Ambar-samudram*	12.8	+ 3.7	32.2
	Tindivanam*	3.2	- 2.4	37.0		Trivandrum	12.8	+ 0.7	77.9
	Cuddalore	3.7	- 11.8	42.6		Fort Cochin	10.2	+ 3.5	147.4
	Nagapattinam	9.9	- 7.6	44.9		Pattambi*	4.6	+ 0.8	99.7
	Aduthurai*	4.2	- 3.0	39.3		Kozhikode	6.1	- 1.3	156.9
	Pattukottai*	4.7	- 2.8	33.0		Taliparamba*	0.9	- 2.1	137.5
Central	Salem	2.2	- 1.6	35.8		Wynad*	2.5	- 1.1	77.3
	Coimbatore (A. M. O.)*	2.2	- 0.8	17.1		Nileshwar*	2.3	- 0.1	177.3
	Coimbatore	1.0	- 3.0	18.4		Pilicode*	1.9	- 0.9	151.4
	Tiruchirappalli	2.6	- 4.4	38.5		Mangalore	1.7	- 2.2	160.3
						Kankanady*	1.9	+ 0.1	151.3
					Hills	Kodaikanal	7.7	- 2.5	73.4
						Coonoor*	5.9	- 6.2	46.2
						Ootacamund*	2.7	- 1.6	65.3
						Nanjanad*	2.4	- 0.9	59.2

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

The month began with fairly widespread thundershowers in Tamilnad, particularly in Coastal regions. This sort of weather continued for three days with no appreciable change. On 4-11-1955 a depression was noticed in the South-East Bay of Bengal, about 200 miles South-west of Port Blair. It was active for three days and then became weak on 7-11-1955. Subsequently the weather was dry throughout the State till 12-11-1955. On 13-11-1955 scattered showers were received at a few places in Tamilnad. There was no large change in weather conditions in the next two days.

The weather was practically dry on 16-11-1955 and on the next day as well. On 18-11-1955 conditions became favourable for a revival of the North-East monsoon rains. In the next two days localised showers were received in Tamilnad and in the districts of Malabar and South Kanara. A shallow depression was noticed in the Bay of Bengal on 21-11-1955, about 350 miles east of Nagapattinam. This shallow depression was centred on the next day about 250 miles east-south-east of Madras. Due to its presence scattered showers were received in Tamilnad. This depression got filled up on 23-11-1955 with the result that thundershowers were fairly widespread in coastal Andhra Pradesh and Rayalaseema and scattered in Tamilnad and Mysore. Two days later, fairly widespread showers were received in Tamilnad. For three days from 26-11-1955 practically dry weather existed, barring a few, highly localised, light showers at a few places in the South and coastal regions of Tamilnad. On 29-11-1955 a depression was observed in the Bay of Bengal about 150 miles east of Nagapattinam by about 20 miles. The month ended with fairly widespread, moderate showers in the entire Madras State.

An earthquake shock of moderate intensity, about 4850 miles away from Madras was recorded by seismograph in the Meteorological Office, Madras at 12:11 hours IST on Wednesday 23-11-1955.

Considering the month of November 1955 as a whole, practically the entire Madras State received only sub-normal rains, barring a few localities in the West Coast and in Tirunelveli district.

Weather Review

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The noteworthy rainfalls and the zonal rainfall in inches are furnished below:—

Noteworthy Rainfalls			Zonal Rainfall			
Date	Place	Rainfall in inches	Name of Zone	Rainfall for the month	Departure from normal	Remarks
3/11/55	Nagapattinam	2.0	North	4.2	- 4.0	Below normal
5/11/55 and 30/11/55	Madras (Nungambakkam)—each day	2.0	East Coast	4.9	- 5.6	Far below normal
16/11/55 and 30/11/55	Alleppey—each day	2.0	Central	2.0	- 2.5	do.
21/11/55	Fort Cochin	3.0	South	8.9	+ 0.7	Just above normal
25/11/55	Pamban	4.0	West Coast	4.0	- 0.3	Just below normal
"	Tuticorin	4.0				
"	Trivandrum	4.0				
29/10/55	Palayamcottai	3.0	Hills	4.7	- 2.8	Below normal
	Kodaikanal	2.0				

Agricultural Meteorology Section,
Lawley Road P. O.,
Coimbatore, 13-12-1955.

Departmental Notifications

Gazetted Service—Postings and Transfers

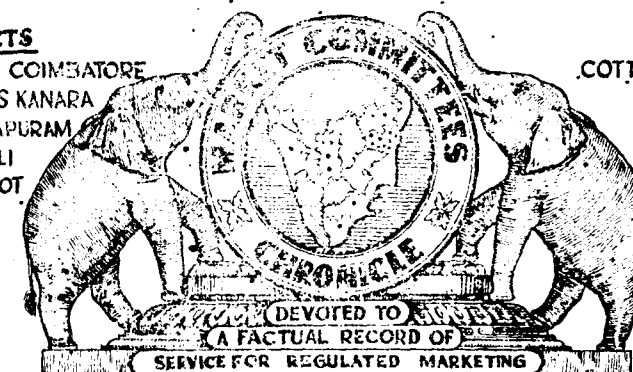
Name and present post	Posted as
Bhavani Shanker Rao, M., Millets and Pulses Specialist, Coimbatore.	Paddy Specialist, Coimbatore.
Ponnaya, B. W. X., Asst. Millet Specialist.	Millet and Pulses Specialist, Coimbatore.
Ramaswami, V., Asst. Cotton Specialist, Srivilliputhur.	Asst. Cotton Specialist, Coimbatore.
Ranganathachari, N. Addl. D. A. O., Madurai.	Asst. Lect. in Economics, Coimbatore.
Ramaswami, K., Paddy Specialist, Coimbatore.	Rice Specialist, Gambia, West Africa.
Ramachandran, S. V., Asst. Marketing Officer,	D. A. O., Trichy.
Ramachandran, C. K., Asst. Cotton Specialist, Koilkatti.	Cotton Extension Officer, Coimbatore.
Santhanam, V., Asst. Cotton Specialist, Coimbatore.	Asst. Cotton Specialist, Srivilliputhur.
Subramania Iyer, K. H., D. A. O., Trichy.	Asst. Marketing Officer, Coimbatore.

Upper Subordinates

Name and present post	Posted as
Achuthan, V., A. D. Tirur, Malabar Dt.	Extension Officer, Tellicherry Block.
Abdul Latheef, M., A. D. Reddiapatty.	Extension Officer, Singampuneri Block.
Appadurai R., Milles Asst., Koilpatty.	Librarian, Agrl. College, Coimbatore.
Balasubramaniam, M., A. D., Peruvallapur.	Asst., in Plant Physiology, Coimbatore.
Balasubramaniam, R., S. D. A., Tanjore.	P. P. A., Tanjore.
Dorairaj, K., Paddy Asst., Tirur.	Paddy Asst., Aduthurai.
Gopalakrishnan, B., A. D., Dharapuram.	Extension Officer, Kundadam Block.
Ganapathy, D., A. D., Lalgudi.	Extension Officer, Vellianai Block.
Gopalakrishnan, R., A. D., Vegetables, Madras.	A. D. Kanjeevaram.
George, A., A. D., Mannargudi.	A. D., Kumbakonam.
Jagannathan, K., Spl. A. D., Cotton, Coimbatore.	Research Asst., Kallar and Burliar.
Krishnaswami Sarma, M. C., F. M., Bhavanisagar.	A. D., Natham, N. Madurai.
Krishnan, S., A. D., Natham.	A. D., Ambasamudram.
Kutti Mudali, K. S., A. D., Coimbatore.	P. A. to D. A. O., Coimbatore.
Kumari Kuntamma, V. K., Librarian, Coimbatore.	Asst., in Millets, Coimbatore.
Muhammad Ghous, I., A. D., Theni.	Paddy Asst., Palur.
Mahaboob Ali Khan, A. D., Trichy.	Extension Officer for Agrl., Valathi Block.
Narasimha Pattathan, B., A. D., Kasargode.	Extension Officer, Nileshwar Block.
Nanjappa Maniagar, Y., A. D., Dharmapuri.	Extension Officer, Kaveripatanam Block.
Padmanabha Menon, E., A. D., Manantody.	A. D., Tirur, S. Malabar.
Ranganatha Prabhu, K., Coconut Nursery Asst., Nileshwar.	Pepper Development asst., Rajapuram.
Ramakrishna Pillai, C., Tinnevely.	A. D., Kilayanur.
Ramaswami, A. N., Asst. in Plant Physiology, Coimbatore.	Asst. in Chemistry, Coimbatore.
Sankaranarayanan, R., Paddy Asst., Palur.	Paddy Asst., Tirur.
Subramaniam, V., A. D., Nanguneri.	Instructor in Agrl. Basic Agrl. Training School, Koilpatty.
Sivaraman, S. S., P. P. A., Tanjore.	Spl. A. D., Dt. Co-operative Cotton Marketing Society, Aduthurai.
Shanmuga Sundaram, R., A. D., Kumbakonam.	A. D., Mannargudi.
Sundaram, K., A. D., Udumalpet.	A. D., Coimbatore.
Shanmugam, C., A. D., Gudiyattam.	Extension Officer in Agrl. Kilavaiithinankuppam.
Thirunavakarasu, R., A. D., Paramathi.	Extension Officer in Agrl., Perambalur.
Venkataswami, B., Extension Officer, Krishnagiri.	A. D., Cuddalore.
Venkataramana Rao, V. G., D. A. O., Tanjore.	A. D. Vegetable, Madras.
Venkatarangam, R., O. S. Dev. Asst., Cuddalore.	Spl. A. D. Cotton, Coimbatore.
Vilvanathan, N.	Entomology Asst., Coimbatore.

DISTRICTS

S. ARCOT, COIMBATORE
MALABAR, S. KANARA
RAMANATHAPURAM
TIRUNELVELI
NORTH ARCOT



CROPS

COTTON, GINGELLY
GROUNDNUT
COCONUT
ARECANUT
TOBACCO

Review of Market Conditions of Commercial Crops in the Areas of Market Committees for November, 1955

1. **Cotton:** (In this section: Candy = 784 lb; Pothi = 280 lb.)

Cotton Stocks: Tirupur: Lint: The cotton market at Tirupur opened with a stock of 6,266 candies of Cambodia and 3,532 candies of Karunganni. Arrivals during the month amounted to 2,984 candies of Cambodia and 934 candies of Karunganni which included 755 cdis. of Cambodia and 23 cdis. of Karunganni got by way of ginnings, as against the arrivals of 4,934 cdis. of Cambodia and 2,166 cdis. of Karunganni in all during the previous month. Despatches from Tiruppur accounted for 4,744 cdis. of Cambodia and 1,695 cdis. of Karunganni which included 1,849 cdis. sent to Travancore-Cochin, Bombay, Orissa States and North Arcot, Madura and Tirunelveli districts within the State. The Market closed with a stock 4,416 cdis. of Cambodia and 2,771 cdis. of Karunganni at the end of the month.

Kapas: The kapas market at Tirupur started with an opening balance of 7,230 pothis of Cambodia and 1,313 pothis of Karunganni kapas at the beginning of the month. Arrivals in the month amounted to 11,965 pothis of Cambodia and 202 pothis of Karunganni as against 12,672 pothis of Cambodia and 142 pothis of Karunganni during the previous month. Disposals during the month were 11,426 cdis. of Cambodia and 512 pothis of Karunganni leaving a stock of 7,770 pothis of Cambodia and 1,003 pothis of Karunganni at the close of the month.

Koilpatti: Lint: The market at Koilpatti started with an opening balance of 633 cdis. of Karunganni and 450 cdis. of Uganda

lint during the month. Arrivals in the month amounted to 800 cdis. of Karunganni and 300 cdis. of Uganda. Disposals accounted for 1,050 cdis. of Karunganni and 300 cdis. of Uganda by way of consumption by mills. There remained a closing stock of 383 cdis. of Karunganni and 450 cdis. of Uganda at the end of the month.

Kapas: There was no stock of Karunganni kapas during the month. Arrivals in the month amounted to 500 pothis of Uganda as against the arrivals of 1,000 pothis during the previous month. The arrivals were entirely ginned and there were no stock at the close of month.

Good demand has been registered during the month from the mills for quality cotton as only low stocks are reported to be available in the market.

Ramanathapuram District; Lint: The three markets of Virudhunagar, Sathur and Rajapalayam put together opened with a stock of 1,095 cdis. comprised of 345 cdis. of Karunganni and 750 cdis. of Uganda. Receipts in the month amounted to 2,075 cdis. which included 5,050 cdis. of Karunganni, 1,140 cdis. of Uganda and 430 cdis. of Cambodia as against the total arrivals of 3,565 cdis. during the last month. Disposals during the month were 2,075 cdis. comprising 710 cdis. of Karunganni, 970 cdis. of Uganda and 390 cdis. of Cambodia. The markets closed with a stock of 1,100 cdis. in all (140 cdis. of Karunganni, 920 cdis. of Uganda and 40 cdis. of Cambodia) at the end of the month.

Kapas: The kapas market in the above three markets opened with a stock of 3,450 pothis (100 pothis of Karunganni, 3,000 pothis of Uganda and 350 pothis of Cambodia) at the commencement of the month. The arrivals during the month amounted to 5,475 pothis (1,575 pothis of Karunganni, 2,300 pothis of Uganda and 1,600 pothis of Cambodia) as against 9,800 pothis in all during the previous month. Disposals during the month were 6,875 pothis (1,675 pothis of Karunganni, 3,300 pothis of Uganda and 1,900 pothis of Cambodia) leaving a closing stock of 2,050 pothis at the end of the month which included 2,000 pothis of Uganda and 50 pothis of Cambodia.

The kapas market in all the markets of this district was, in general, brisk.

South Arcot District; Kapas: All the markets of South Arcot district opened with a stock of 253 pothis at the commencement of the month. Receipts in the month amounted to 2,743

pothis as against 3,339 pothis during the previous month. The receipts during the month were only in Villupuram and Panruti markets. Despatches accounted for 2,694 pothis in the month which are wholly confined to Tirupur in Coimbatore district. There was a closing stock of 302 pothis at the end of the month with the trade.

Cotton Prices: Lint: Tirupur: Even though the transactions in lint were mostly confined to second and third qualities, the prices of both cotton lint and kapas were firm during the month. The second quality lint was sold at 840/- and the lint of Co. 4 cotton at Rs. 1,040/- per cdy. The price of second quality Karunganni lint was sold at Rs. 727/- per candy.

Koilpatti: Price of cotton lint at Koilpatti was more or less steady around Rs. 700/- to Rs. 720/- till the third week of the month and advanced by Rs. 26/- during the last week of the month consequent to the demand from the mills caused as a result of shrinkage in stocks. Transactions for the first quality, second quality and inferior varieties were placed at Rs. 700/- to Rs. 746/-, Rs. 650/- to Rs. 700/- and Rs. 540/- to Rs. 560/- per cdy. respectively. Prices of Uganda lint were steady at Rs. 1,120/- for certified quality and Rs. 970/- to Rs. 1,000/- for the uncertified quality.

Ramanathapuram District: The Karunganni lint price in all the markets opened at the following rates:

Rs. 686 to 700 for I crop (per cdy.)

Rs. 630 to 650 „ II „

Rs. 580 to 626 „ Tinny Karunganni mixture (per cdy.)

Rs. 470 to 530 „ Tinny

The prices gradually increased and stood steady as follows:

Rs. 696 to 741 for I crop (per cdy.)

Rs. 653 to 676 „ II „

Rs. 590 to 640 „ Tinny Karunganni mixture (per cdy.)

Rs. 500 to 540 „ Tinny

The Uganda lint prices were placed as below:

Rs. 1,700 to 1,200 for M. U. 2 certified (per cdy.)

Rs. 1,120 for M. U. 1 „

Rs. 920 to 936 for uncertified Uganda „

The prices of Cambodia kapas were placed at Rs. 750 to 800 for the best and Rs. 700 to 750 for the II type.

(In thousands)

Name of the Market	Opening balance	Arrivals	Disposals	Closing balance
<i>Malabar district:</i>				
Kozhikode	7,700	4,100	5,700	6,100
Ponnani	500	340	290	550
Badagara	430	1,832	1,747	515
Tellicherry and Dharmadam	706	1,036	1,069	673
<i>South Kanara district:</i>				
Mangalore	50	325	375	110

Prices: (a) Prices of coconuts as between the different markets of Malabar district ruled at the rates of Rs. 80/- to 126/- per thousand nuts during the month.

(b) Prices of coconuts in Mangalore stood at Rs. 150/- to 170/- for raw nuts and Rs. 165/- to 215/- dry nuts.

Copra: Stocks: The stock particulars of copra transacted in Malabar and South Kanara districts during the month are extracted below:

Name of the Markets	Opening balance	Receipts	Disposals	Closing balance
<i>Malabar district: (in edys.)</i>				
Kozhikode	1,833	2,200	2,300	1,233
Badagara	696	1,510	1,476	736
Mangalore (in tons)	33	135	130	39

Prices: (a) The prices of copra as between the different markets ruled during the month are extracted below:

(Prices in Rs. per edy.)

Varieties	Kozhikode		Badagara	
	Maximum	Minimum	Maximum	Minimum
Office	292	272	290	275
Edible	325	322	325	320
Rajpu	375	355	368	350
Madras	330	320	325	320
Gola	345	320	...	...

(b) The prices of copra in Mangalore ranged between Rs. 275/- to 300/- per edy.

5. *Arecanut:* (In this section: Bag = 100 lb.)

Stocks: The stock particulars of Arecanut marketed in Mangalore and Malabar districts are extracted below:

(In bags)	Opening balance	Receipts	Disposals	Closing balance
Kozhikode	2,393	3,089	3,089	23,84
Ponnani (in cwt.)	696	1,510	1,088	388
Mangalore (Supari)	1,958	21,800	20,578	3,180

Prices: (a) Prices of Arecanut (choor) in Malabar district ranged from Rs. 138/- to 164/- per bag.

(b) The price ranges of Supari in Mangalore market as between the different varieties are extracted below:

Prices in Rs. per Cwt.

Varieties	Minimum	Maximum
Koka	85	137
Choll	175	203
Malabar Supari	110	145
Mangalore Supari	137	172

No meetings were held in any other Market Committees during the month.

III. Quality Appraisal: For analysis of quality factors in groundnuts, the South Arcot Market Committee during the month analysed 378 samples drawn from out of arrivals of 12,417 lots comprising of 43,040 bags of Kernels. (Bag = 177 lb.)

The details of analysis, which are of interest, are extracted below:—

Particulars	Cuddalore	Chinnasaalem	Tindivanam	Viruddachalam	Panruti	T. Koilur
1. Dryage:						
2% and below ..	5	..	2	19	..	2
Above 2% upto 3% ..	4	..	..	19	1	..
Above 3% and upto 4% ..	14	..	6	14	4	..
Above 4% and upto 5% ..	17	19	7	20	9	..
Above 5% and upto 10% ..	92	13	9	..	71	4
Above 10% ..	10	..	..	..	17	..
2. Total Refraction:						
4% and below ..	49	15	10	32	4	6
Above 4% and upto 8% ..	73	17	14	40	79	..
Above 8% ..	20	..	..	..	19	..

Of the 378 samples, 116 samples accounted for refraction reduced to common basis within 4%, 223 samples within 5 to 8% and 39 samples above 8%.

Sixty-eight entries were secured for summer and winter crop of groundnut kernels for quality competition in South Arcot District.

SOUTH ARCOT MARKET COMMITTEE

Inauguration of the Ninth Regulated Market at Kallakurichi

on 15—12—1955

by Sri A. Kunhamed, B. A.,

Collector of South Arcot, Cuddalore

The Ninth Regulated Market of the South Arcot Market Committee was opened at Cuddalore by Sri Arakkal Kunhamed, B. A., District Collector, South Arcot, on 15—12—1955. There was a very large gathering of ryots and traders. Hundreds of ryots had brought their commercial crop, groundnut for sale. Total arrivals for the day exceeded 1350 bags of groundnut kernels in nearly 270 lots. Sri K. Parthasarathi Naidu, B. A., B. L., M. L. A. presided over the function.

Welcoming the audience present, Sri K. Parthasarathi Naidu, gave a brief outline of the activities and the progress achieved by the Committee so far. He said that over 91% of the groundnuts brought for sale into the market centres in South Arcot District is being sold through the Regulated Markets of this Committee. Gingelly and Cotton have also been notified by the Government and the Committee has been arranging to sell these two crops through their markets for the last two years. He wanted that jaggery and paddy should be included in the list of commercial crops in South Arcot and sold through the regulated markets of this Committee for the betterment of the growers of this District. He also said that the success of this Committee from the beginning was due to the endeavours of the members and staff of the Committee. The co-operation from the traders' side was also there, though earlier to 1939, the groundnut traders were actually plundering the poor growers by false weights and offering poor prices after making improper deductions.

After his speech, Sri K. Parthasarathi Naidu requested the District Collector to open the Market and to auction by open bid the first five lots of groundnuts received for sale that day.

Inaugurating the market, Sri A. Kunhamed, B. A., (District Collector and Ex-Officio Chairman, South Arcot Market Committee, Cuddalore) said that he was thankful to all present and to the Secretary of the Market Committee in asking him to open the Ninth Regulated Market of the Committee at Kallakurichi. He said that

he was at present the Chairman and was performing the functions of the Committee as well, but would relinquish these functions as soon as the elected body takes charge. He said that a Committee of this kind really helps the growers and traders; in that they are able to know the prevailing market rates (2) in getting correct prices (3) correct weighment before the Committee's (4) immediate payment for the commercial crops sold and (5) full price without deductions for commission, *mahimai* etc. As regards traders he said that they are able to buy their required quantity in one place (2) by the kind of quality and stuff they want (3) direct purchase from growers without intervention of commission agents etc., and (4) finally the good-will of the growers. He said that the gunny service is another service which the Committee has been giving to the sellers. Even bad stuff when it is packed in new gunnies, he said, looks better and fetches a better price. No charges are being levied by the Committee on the sellers or buyers.

The Collector then wishing the Committee all success, opened the Market by cutting the ribbon. The first five lots were then auctioned by him.

The State Marketing Officer, Madras, Sri. Obeidulla Shah said that this committee has achieved great progress in the Marketing of commercial crops, namely groundnuts, in this district. He also said that this was the best market committee in the State and probably in India. He wanted that the committee should arrange to take up other crops and products also soon and bring all them under notification and regulated sale.

Sri Kandasami Padayachi, M. L. A., Ulundurpet, on behalf of the growers and Sri Venkatachalam Chettiar on behalf of the traders present also spoke and wished the Committee long life and continued success in its undertaking.

After a vote thanks by the Secretary, Sri K. V. Natesan, B. Sc., Ag., the function terminated.

Crop and Trade Reports

Groundnut—Second report 1955—'56—Madras State: The area sown with groundnut upto September 1955 is estimated at 1,225,000 acres. Compared with the area of 1,222,000 acres estimated for the corresponding period of the previous year, the present estimate is an increase of 0.2 per cent. Compared with the average area of 1,208,700 acres calculated for the five years ended 1954—'55, this is an increase of 1.3 per cent. The area under the crop is negligible in the districts of South Kanara and the Nilgiris. The area estimated for the current year is the same as that for the previous year in Chingleput and Malabar districts. An increase in area has been estimated in the districts of North Arcot, Coimbatore and Tirunelveli and a decrease in the other districts of the State. The yield is expected to be normal in the districts of Tanjore, Tirunelveli and Malabar and slightly below the normal in the other districts. The Seasonal Factor for the State as a whole works out to 96 per cent of the normal which is the same as that for the previous year. The wholesale price of groundnut (machine-shelled) per standard maund of 82½ lb. or 3200 tolas as reported from some important market centres on 8—10—1954 was Rs. 16—4—0 at Cuddalore, Salem and Erode. Compared with the prices which prevailed during the corresponding period of the previous year, the current year's price is a decrease of 8.8 per cent at Cuddalore and 4.4 per cent at Salem and an increase of 6.6 per cent at Erode. Figures of areas by districts are given in the statement appended.

Gingelly—Second Forecast report 1955—'56—Madras State: The area sown with gingelly upto 25th September 1955 is estimated at 234,600 acres. Compared with the area of 236,900 acres estimated for the corresponding period of last year, it shows a decrease of 1.0 per cent. As compared with the average area of 211,400 acres calculated for the five years ended with 1954 '55 the present estimate shows an increase of 11.0 per cent. An increase in area is estimated in the districts of South Arcot, Salem, Coimbatore, Tiruchirappalli, Ramanathapuram, Malabar and South Kanara and a decrease in area is estimated in the districts of Chingleput, North Arcot and Madurai. The area estimated is the same as that of last year in the districts of Tanjore and Tirunelveli. The area under the crop in the Nilgiris district is little or negligible. The early crop of gingelly has been harvested in parts of the State. The yield per acre was below the normal in the districts of North Arcot and Tirunelveli and was normal in Tanjore district. The wholesale price of gingelly seed per standard maund of 82½ lbs. as reported on 1—10—1955 was Rs. 21—10—0 in Tuticorin, Rs. 20—9—0 in Salem and Rs. 18—0—0 in Cuddalore. Compared with the prices which prevailed on 2nd October 1954, these prices show a fall of 16.5 per cent in Cuddalore and 6.0 per cent in Tuticorin and an increase of 13.8 per cent in Salem. Figures by districts are furnished in the statement appended.

Paddy 1955—'56 First report Madras State: The area sown with paddy upto September 1955 in the Madras State is estimated at 2,903,000 acres. Compared with the corresponding estimate of 2,293,000 acres for the previous year, the current year's estimate is an increase of 0.3 per cent. The area estimated in the current year is the same as that for the previous year in the Nilgiris district. A decrease in area is estimated in the districts of Tiruchirappalli, Tanjore, Madurai, Ramanathapuram and South Kanara and an increase in area in all the other districts of the State. The first crop of paddy has been or is being harvested on an extensive area in the districts of North Arcot, Tirunelveli and Malabar. The outturn of these harvests is reported to be fair. Harvests on limited areas were reported from Chingleput, South Arcot, Salem, Coimbatore and Madurai districts and the outturn in these districts also has been reported to have as generally fair. Harvests of crop is reported to have just commenced in Tanjore and South Kanara districts. Water

supply is reported to be insufficient in the rainfed areas of all the districts except Tanjore, Malabar, South Kanara and the Nilgiris. Paddy crop is reported to have been affected by pests in Tirukoilur Taluk of South Arcot district. Remedial measures are being taken.

The wholesale price of paddy II sort per standard maund of 82.2/7 lbs. (equivalent to 3200 tolas) as reported from some market centres on 8-10-1955 was Rs. 8-8-0 at Tiruchirappalli, Rs. 8-9-0 at Cuddalore, Rs. 8-11-0 at Nagapattanam, Rs. 8-12-0 at Kumbakonam, Rs. 9-2-0 at Tanjore and Rs. 10-0-0 at Mangalore. Compared with the prices which prevailed during the corresponding period of the previous year, the current year's prices reveal a fall of 18.7 per cent at Nagapattanam, 17.0 per cent at Tanjore, 13.3 per cent at Cuddalore, 9.3 per cent at Tiruchirappalli and 2.8 per cent at Kumbakonam and an increase of 3.2 per cent at Mangalore. Figures of areas by districts are given in the statement appended.

Cotton—Intermediate condition report—Period upto the end of October 1955: The condition of the standing crop is reported to be generally satisfactory in all the districts of the State except in Chingleput, South Arcot, North Arcot and Tirunelveli districts. The yield per acre is expected to be normal in Tanjore and Malabar and below normal in the case of irrigated crop in Chingleput, North Arcot and Tirunelveli districts. In South Arcot district, the yield per acre of the dry crop is reported to be below normal due to shedding on account of unexpected showers in October. It is too early to report on the yield of the crop (dry crop) in Ramanathapuram and Tirunelveli districts. The wholesale price of cotton lint per standard maund of 82.2/7 lb (equivalent to 3,200 tolas) as reported from important market centres on 5-11-1955 was Rs. 93-7-0 for Coimbatore Cambodia, Rs. 78-12-0 for Coimbatore Karunganni, and Rs. 76-12-0 for Tiruppur Karunganni, and Rs. 61-15-0 for Tirunelvelies. Compared with the prices for the corresponding period of last year, these prices reveal a fall of 12.6 per cent in the case of Tirunelvelies at Madurai, 8.7 per cent in the case of Coimbatore Karunganni and 2.4 per cent in the case of Coimbatore Cambodia.

Potato—Third and final forecast report 1955-'56—Madras State: The potato crop is grown mainly in the Nilgiris district and to a small extent in Salem and Madurai districts. The area under potato crop for the year 1954-'55 is estimated at 19360 acres (1620 acres under winter crop and 17740 acres under summer crop). Compared with the final area of 20330 acres in the previous year, this is a decrease of 4.8 per cent and compared with an average area of 19140 acres calculated for the five years ending 1953-'54 this is an increase of 1.1 per cent. An increase in area is estimated in the districts of Salem and Madurai and a decrease in the Nilgiris.

The seasonal factor for the State as a whole works out to 92 per cent (95 per cent of the normal for winter crop and 92 per cent of the normal for summer crop) as against 92 per cent of the normal in the previous year. On this basis the total yield works out to 55860 tons (4840 tons under winter crop and 51020 tons under summer crop). Compared with estimated production of 57400 tons in the previous year the present estimate shows a decrease of 2.8 per cent and compared with an average estimated production of 49760 tons calculated for the five years ending 1953-'54, the present estimate shows an increase of 12.3 per cent. The wholesale price of potato per standard maund of 82.2/7 lbs. (or 3200 total) at Mettupalayam on the 7th October 1955 was Rs. 15-4-0. Compared with the price of Rs. 9-8-0 for the corresponding period of the previous year this is an increase of 60.5 per cent. Figures of estimated area and yield by districts are furnished in the statement appended.

Potato—Second forecast report 1954-'55—Madras State: The potato crop is grown mainly in the Nilgiris district and to a small extent in Salem and Madurai districts.

The area under the crop upto 25th May 1955 is estimated at 19,860 acres. Compared with the final area of 20,330 acres for the previous year this shows a decrease of 2.3%. The decrease is attributed to non-availability of manures on credit from some of the manure-mixing companies. Information in regard to winter and summer crops is given below:—

Winter Crop: The area under the winter crop of potato is estimated at 2,260 acres as against the final area of 1,840 acres for the previous year representing an increase of 22.8%. An increase in area is estimated in the districts of Salem and the Nilgiris. The area under winter crop in Madurai is negligible. The seasonal factor for the State as a whole works out to 100 per cent as against 99 per cent estimated for the previous year. On this basis the total yield works out to 7,090 tons as against 5,720 tons estimated for the previous year representing an increase of 24.0 per cent.

Summer Crop: The area under summer crop is estimated at 17,600 acres as against the final area of 18,490 acres for the previous years representing a decrease of 4.8 per cent. The decrease in area is estimated in the Nilgiris district. The areas under the summer crop in the Salem district is negligible. The condition of the standing crop is reported to be satisfactory. The wholesale price of potato per standard maund of 82.2/7 lb. at Mettupalayam on 3-6-1955 was Rs. 12-0-0. Compared with price which prevailed in the corresponding period of the previous year (5-6-1954) this is an increase of 20.0 per cent.

Sugarcane—Intermediate condition report—Period up to the end of October 1955: The condition of the standing crop is reported to be generally satisfactory in all the districts of the state. The yield per acre is expected to be normal in the districts of Chingleput, South Arcot, Coimbatore, Tiruchirappalli, Tanjore and South Kanara. It is too early to report on the yield of the crop in the districts of North Arcot, Ramanathapuram and Tirunelveli. The average wholesale price of jaggery per standard maund of 82.2/7 lb. at important market centres on 5th November 1955 was Rs. 13-15-0 in Mangalore, Rs. 10-7-0 in Coimbatore, Rs. 9-12-0 in Tiruchirappalli, Rs. 9-1-0 in Cuddalore, Rs. 8-13-0 in Erode and Rs. 6-9-0 in Salem. Compared with the prices which prevailed in the corresponding period of the previous year, these prices reveal a fall of 39.3 per cent in Salem, 38.8 per cent in Cuddalore, 24.6 per cent in Tiruchirappalli, 20.9 per cent in Mangalore, 20.5 per cent in Coimbatore and 18.5 per cent in Erode.

OBITUARY.

It is with deep regret that we record the sudden death of one of our valued members, Mr. K. K. Nambiar, Secretary of the Indian Central Arecanut Committee, at his residence in Kozhikode, on 12-12-1955.

Born on 13-9-1907, in an aristocratic Nair family in North Malabar, Mr. Nambiar had his education at Government College, Mangalore and the Agricultural College, Coimbatore, from where he took his B.Sc. degree in 1929. He was one of the brilliant students of the Agricultural College and winner of Robertson Prize for the highest marks and proficiency in Agriculture. He joined service as Assistant in Paddy at the Agricultural Research Station, Pattambi, in 1929. In the year 1947, the Government of India constituted an *ad hoc* Committee for development of arecanut crop and in 1948, Mr. Nambiar was appointed as senior Agricultural Officer to undertake a survey of the crop in the Indian Union. Subsequently the Indian Central Arecanut Committee was formed and Mr. Nambiar had the distinction of being appointed as its first Secretary, in October 1949.

At Pattambi Mr. Nambiar was closely connected with the breeding of improved varieties of paddy for the West Coast, in addition to a number of agronomic experiments. He was associated with the compilation of the book "Rice in Madras" by Sri K. Ramiah, published in 1937. He brought out in 1947, a monograph entitled "Survey of Arecanut crops in Indian Union". Mr. Nambiar had travelled throughout the States of India and other Asian countries as well. The great strides made by the Arecanut Committee and its subsequent development to establish Regional Arecanut Research Stations are standing evidences of his drive and organizing capacity. In his personal life, Mr. Nambiar strove to attain the stature of a perfect man and in the remarkable success he attained, he remained a model for his colleagues to admire and emulate. The popularity he gained among a very wide circle of friends was the natural outcome of an affable nature and a remarkable capacity for hard and systematic work.

Mr. Nambiar remained a member of the Madras Agricultural Students' Union throughout his career.

We convey our heartfelt condolences to the bereaved family and pray that his soul may rest in peace.

The Madras Agricultural Students' Union.

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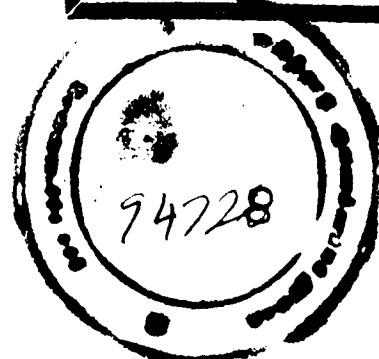
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