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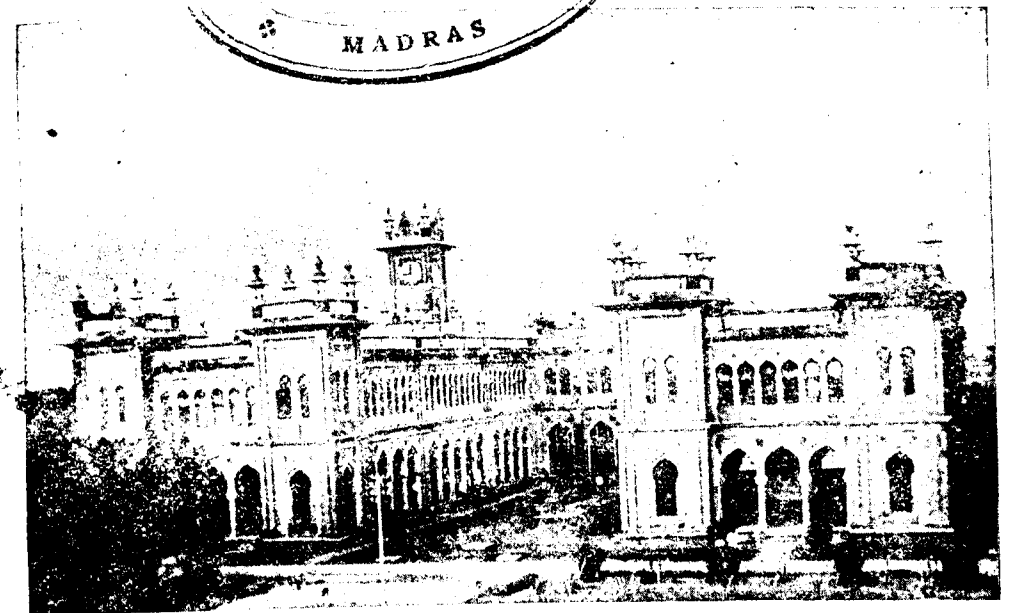
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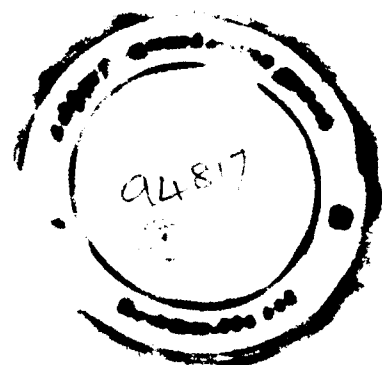
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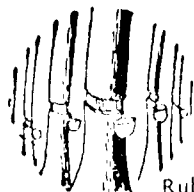
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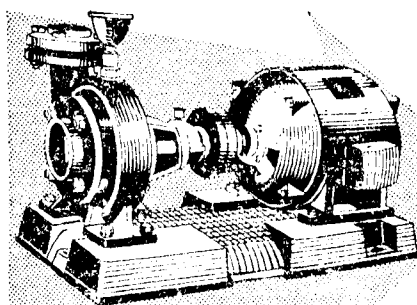
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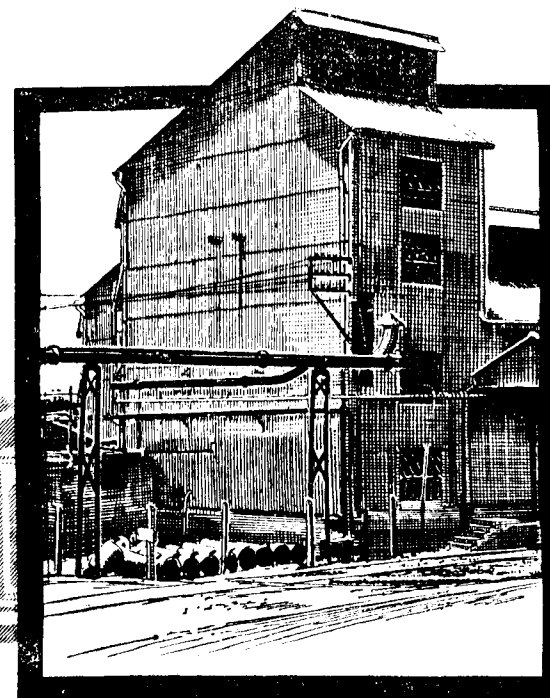
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Madras Agric. J., 45 : (11) 407-410, 1958

Cholam TPT. 1 — An economic mutant of Talaivirichan Cholam (*Sorghum roxburghii*).

by

R. VEERASWAMY,
Agricultural College and Research Institute,
Coimbatore.

Introduction : *Talaivirichan Cholam* (*Sorghum roxburghii*, var. *hians*. Stapf) is a major variety of cultivated cholam in Madras State, occupying over five lakhs of acres in the districts of North Arcot, South Arcot, Salem, Chingleput and portions of Tiruchirapalli and Coimbatore. Snowden (1936) has taxonomically classified this variety as *Sorghum roxburghii* under sub-series *Guineensia*. This is mainly a grain crop and the plants grow up to a height of 14 feet with a duration of about five months. The most distinguishing feature of this type is the streaming branches of the earhead. The colour of the grain is white but a further differentiation into chalky white and pearly white is also possible (Rangaswamy Ayyangar et al 1934). White pearly grains are preferred for food and also best suited for popping (Rangaswamy Ayyangar and Sankara Ayyar 1936). Three strains of *Talaivirichan Cholam* viz., Co. 2, Co. 3 and Co. 12 evolved at the Millets, Breeding Station, Coimbatore, are under distribution. Since these did not come up well in North Arcot tract, improvement work for the evolution of a high yielding strain was taken up since 1949, at the Regional Millet Station, Tiruppathur, which is the central place of the tract.

Material and Methods : A representative collection of 500 fresh seed samples of *Talaivirichan Cholam* collected from the various villages of the central districts and 30 cultures of the same variety obtained from the Millets, Breeding Station, Coimbatore, were examined at Tiruppathur for their suitability to the tract. Promising single plants with a combination of desirable attributes were isolated on the basis of positive deviations for yield from the collections and tested for their purity of yields in compact family blocks (Hutchinson and Panse 1937) and advanced to the final stage of randomized and replicated yield trial. The most economic culture was passed on for confirmatory test in a cultivator's fields at several centres.

Experimental data: Yield trials were conducted with the promising selections along with Co. 3 and Co. 19 during the monsoon seasons of 1951 and 1952. Since Co. 2 fell short of the standard in the earlier stage itself, it was omitted from further trials.

The yield data of the trials are furnished in Tables I and II.

In the first year of trial (1951), the yield differences were found to be statistically significant for both grain and straw yields, A. S. 8006 being the best in both the cases. In the second year of trial (1952), A. S. 8006 once again topped the list in respect of both grain and straw yields, the yield differences being statistically significant. It is evident from the results, that culture A. S. 8006 is outstandingly good, recording consistently higher yields than all the selections compared.

To further confirm the superiority of A. S. 8006, it was compared with the local bulk in cultivators' fields at twenty typical centres in North Arcot and Salem districts. In all the centres of trials, the culture was found to be superior to the local *Talaivirichan Cholam* with an increased grain yield ranging from 20 to 30 per cent and it was similar to the local type in duration, height, plant vigour and grain colour. Since A. S. 8006 was found suitable to this tract, giving higher yields than the local, it was accorded a station number viz., "*Cholam TPT. 1*" and released for distribution as an improved strain for the tract.

Discussion: It is interesting to record that A. S. 8006 was isolated as a mutant with white pearly grains from a bulk population of the white chalky grained strain, *Cholam Co. 2*, at Coimbatore, in 1941. The performance of this mutant was not found promising at Coimbatore and the strains Co. 2 and Co. 3 continued to be the highest yielders. However A. S. 8006 was one among the 30 cultures sent from Coimbatore to Tiruppathur for study. In the north Arcot tract, it out-yielded not only its original parent (Co. 2) but also the other strains of *Talaivirichan Cholam*, Co. 3 and Co. 19 and other promising local selections (Table I and II). This gives an indication that culture A. S. 8006 representing the mutation of the "reverse type" in respect of grain colour has also developed a change in its adaptability, as judged by its performance in a new environment.

Summary: The *Talaivirichan Cholam* is one the important Sorghum varieties of the Madras State and crop breeding was taken up in this variety at the Regional Millet Station, Tiruppathur, in 1949, to evolve a high yielding strain suitable for the central districts. Based on the uniformly good performance of culture A. S. 8006, it was released as an improved strain, "*Cholam TPT. 1*" It is of interest to note that A. S. 8006 had its origin as a mutant with white pearly grains, isolated at Coimbatore, in 1941. Under Coimbatore conditions, its performance was not economic but in the North Arcot tract it proved itself to be the most economic culture, outyielding the strains Co. 2, Co. 3 and Co. 19 and other promising local selections. This indicates, that A. S. 8006 which is a mutant in respect of grain colour has also developed a change in its adaptability to a new environment.

Acknowledgment: The help and guidance given by Sri B. W. X. Ponnaiya, B. Sc., Ag., M. Sc., Millets and Pulses Specialist, Coimbatore, in the preparation of this article are gratefully acknowledged.

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TABLE I
Monsoon Season, 1951.

Particulars	Variants					'Z' test satisfied or not P = 0.05	Critical difference
	A.S. 8006	A.S. 8080	Co. 19	A.S. 8083	Co. 3 (Standard)		
Grain yield expressed as a percentage of standard.	177.6	144.1	140.8	135.3	125.8	Satisfied	22.6
Straw yield expressed as a percentage of standard.	195.6	152.8	120.6	139.6	128.9	Satisfied	24.9
Conclusion: 1. Grain yield	A.S. 8006,	A.S. 8080,	Co. 19,	A.S. 8083,	Co. 3,	Local.	
2. Straw yield	A.S. 8006,	A.S. 8080,	A.S. 8083,	Co. 3,	Co. 19,	Local.	

TABLE II
Monsoon Season, 1952.

Particulars	Variants					'Z' test satisfied or not P = 0.05	Critical differences
	A.S. 8006	Co. 19	A.S. 8080	T.S. 29	Co. 3 (Standard)		
Grain yield expressed as a percentage of standard.	160.6	149.0	145.7	120.1	100.0	97.2	93.8
Straw yield expressed as a percentage of standard.	123.6	122.9	118.9	107.7	100.0	81.6	90.6
Conclusion: 1. Grain yield	A.S. 8006,	Co. 19	A.S. 8080,	T.S. 29,	Co. 3,	T.S. 25,	T.S. 21.
2. Straw yield	A.S. 8006,	Co. 19,	A.S. 8080,	T.S. 29,	Co. 3,	T.S. 21,	T.S. 25.

“A Note on Third Leaf in Sugarcane as an Indicator of Nutrient Status and Yield of the Crop”.

by

T. R. SUBRAMANIAN,
Assistant in Chemistry, Central Sugarcane Research Station,
Cuddalore.

Foliar analysis for determining the nutritional needs of the sugarcane crop has been widely adopted in many cane producing countries. In Puerto Rico, 4, 5, 6 leaf at 10-12 weeks after fertilisation of the cane is taken as an indicator of the nutrient status of the crop and various levels of N, P and K in leaf have been fixed to denote the different levels of nutrition of the crop (4). Foliar diagnosis as a routine control of manurial practices is adopted in Mauritius, British Guiana and other places. Mohan Rao (3) has reported that at Anakapalle the differences in availability and nutritive capacities of different manures are manifested in third leaf nitrogen. Recent work in Hawaii has indicated that stalk tissues are more sensitive and reliable indicator than foliar regions (1).

With the object of determining whether the nutrient content of any part of the plant reflects the nutrient status of the crop and the final yield, samples of third leaf and green leaf stem were collected eight weeks after second manuring of cane. The permanent manurial experiment, (gardenlands) was utilised for the purpose. The treatments are as follows:

- Farm Yard Manure at 250 lb. N per acre;
- Ammonium sulphate at 250 lb. N per acre;
- Same as (b) + Sunnhemp at 5000 lbs. green matter per acre;
- Same as (b) + minor elements;
- Same as (b) + 100 lb. P_2O_5 + 50 lb. K_2O per acre;
- No manure.

The leaf samples were analysed for N, P and K. The results of analysis are furnished in the following tables.

Summary: (1) The third leaf reflects the treatments more clearly than the green leaf stem in respect of N, P and K.

(2) Varietal variations are observed in respect of third leaf potash though none are indicated with regard to nitrogen.

(3) In the variety Co. 527, a general linearity is noticed in the relationship between third leaf nitrogen and CCS and an almost perfect linearity among the treatments where ammonium sulphate forms part.

Acknowledgment: I thank the Agronomy staff of Central Sugarcane Research Station, Palur for furnishing the yield data pertaining to this experiment. My thanks are due to the I. C. S. C. for financial grants towards the scheme of research on this station.

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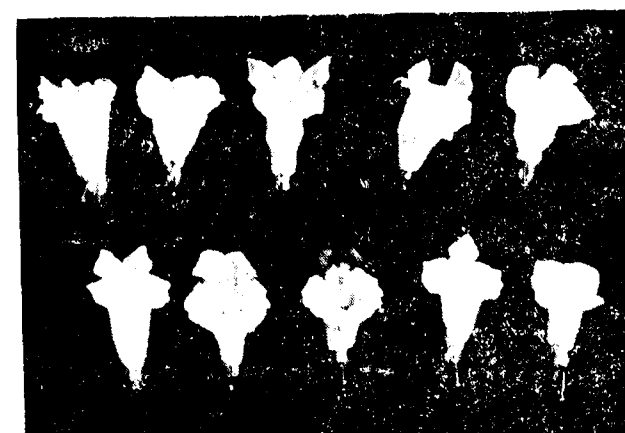
"The address by Dr. K. Ramiah published in the September 1958 issue of the journal was a tape recording of his extempore speech and the editorial board regrets that for want of time the tape recorded speech could not be sent to Dr. Ramiah for revision and small changes".

Madras agric. J., 45 (11):415-416, 1958.

Research Note

Variation in the flowers of *Sesamum Orientale* (Indicum) Linn. and the Occurrence of Multilocular Fruits

The corolla of the flower of the gingelly plant, *Sesamum Orientale* Linn is gamopetalous, tubular-ventricose and two lipped. There are five lobes, two broad ones constituting the upper lip and the other three, the lower lip. Among the three lower lobes, the middle one is a little longer. This protruding lower lobe is characteristic of the gingelly flowers and has coloured markings and bright yellow spot on the ventral surface. Nohara (1935) has distinguished two types of corolla, "opened" and "closed". In the former the flowers open wide and its upper lip bends backwards and in the latter the flower does not open so wide and appears like a truncated tube. He also reported that this character was hereditary caused by a single gene. At the Agricultural Research Institute, Coimbatore some variations in the lower lobes of the flower were noted in the sesame plants raised under irrigation and they are recorded hereunder. The variations were noted every year though they are not confined to any particular variety. Variations range from complete absence of the prominent lobe to lobed condition (Plate I) and can be classified as follows:



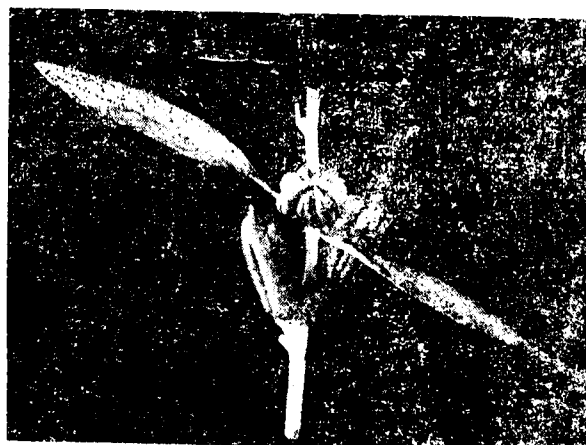
Variation 1: The protruding lobe is completely absent except for a very small vestige. This is of rare occurrence.

Variation 2: In this a tendency for doubling in the protruding lower lobe of the corolla is noticed. The two lobes are separated in some flowers by a very shallow dentition while in others

they are quite separated and distinct. The variations are noted in the improved strain TMV. 2 gingelly, S. I. 66 (Nagpur white) and other varieties with 6-8 loculed capsules.

Variation 3: Separation of the two protruding lower lobes by an intervening lobe, simulating a triple lobed condition is also observed.

Variation 4: Four lobes, two big normal ones and two smaller lips between them are present. Also the number of stamens exceeds by one to two than the normal 4.



The variation described in items 2, 3 and 4 are common in varieties with multiloculed capsules. The capsules developing from flowers with variation 4, have more than 8 locules (Plate II). Nohara (1935) reported such multiloculed capsules as synanthial fruits. He also recorded that the phenomenon synanthly occurred only in fasciated plants. But in cases of synanthial fruits noted here, the plants were normal except for some disturbance in the phyllotaxy in the region where such abnormal fruits were found. Two leaves come together and in their axil one multiloculed fruit is found which indicates that it is a case of fusion. In some cases, the fusion of two flower primordia is not complete and therefore two fruits fused only by their sides occur. The flowers which will develop into such synanthial fruits can be detected by the juxtaposition of two leaves, and doubling of the lower lobes of the corolla.

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S. G. AIYADURAL,
N. SRINIVASALU.

REFERENCES CITED

1. Nohara S. 1935. Genetical studies on *Sesamum indicum*, LINN. Journal of the College of Agriculture, Tokyo Imp. University Vol. XII No. 2

Abnormalities in the flower of *Musa* L.

In the normal flower of *Musa* L. the outer perianth is petaloid and 5-lobed, the outer three lobes constituting the three sepals and the inner two, representing two of the petals. These two lobes together with a semi-transparent boat-shaped structure found opposite to them complete the inner whorl. Stamens are six in number in the male and hermaphrodite flowers but only five are generally seen and even in these, fertile pollen is absent. Ovary is inferior and 3-celled with a stiff erect style.

Gopalan Nair and Daniel (1951) have recorded the occurrence of two free petals, two united petals and five fertile stamens in a wild *Musa* species growing in the Singampatti Hills. While examining materials collected for class, the author observed a flower in which there were 4 distinct perianth members and five stamens of which one was rudimentary (Fig. 1) Of the 4 perianth members, two were boat-shaped and not lobed while the other two had two lobes each.

Jacob (1952) has recorded the presence of three stamens with two rudimentary ones or four with one rudimentary stamen. The author observed similar instances namely four with one rudimentary stamen (Fig. 1) and five with one rudimentary stamen (Fig. 4).

The author also observed a flower of *Musa* in which there were 4 stamens, three of which were normal carrying 2 celled anthers each and the other bearing a single 1 celled anther. This stamen was petaloid and its 1 celled anther was adnate to the petaloid margin near the apex (Fig 5), a feature characteristic of the allied families of Cannaceae and Marantaceae.

The natural order Scitamineae is composed of 4 families Musaceae, Zingiberaceae, Cannaceae and Marantaceae, distinguished mainly by the number of functional stamens. Musaceae has either 6 or 5 (rarely 4 or 3) functional stamens, Zingiberaceae has only one and Cannaceae and Marantaceae have only a 1 celled anther. Zingiberaceae has 1-3 large petaloid staminodes, Cannaceae has 4-6 petaloid staminodes and Marantaceae has 2-5 petaloid staminodes. The presence of a petaloid stamen in Musaceae is therefore of evolutionary significance, suggesting that the advanced families of the order must have arisen by reduction in the number and petaloidy of the stamens of Musaceae.

Botany Section,
Agricultural College, }

G. TULSIDAS.

REFERENCES

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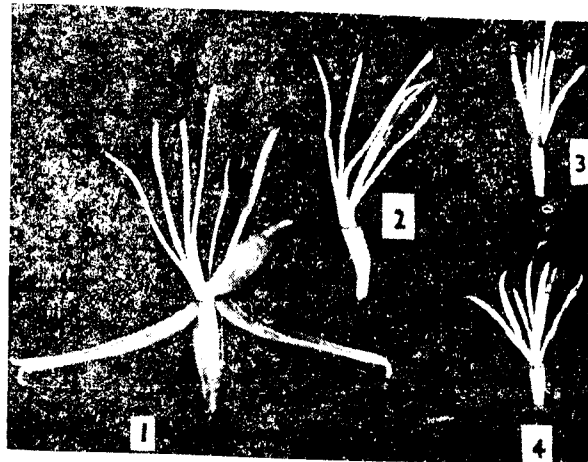


FIG. 1. Flower with 4 distinct petals and 5 stamens of which one is rudimentary.
 FIG. 2 & 3. Normal flowers with 5 stamens.
 FIG. 4. Flower with 6 stamens of which one is rudimentary.

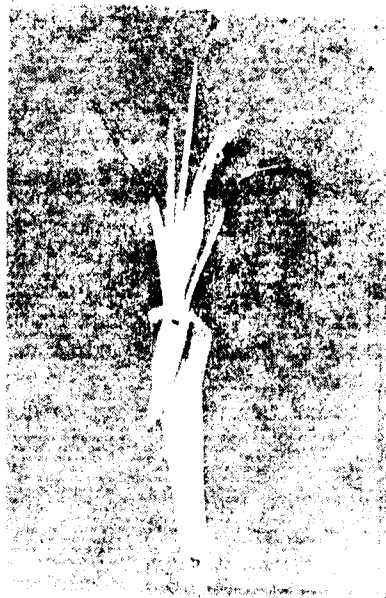


FIG. 5. Flower with 4 stamens of which one is petaloid and with 1-celled anther.

Madras agric. J., 45 (11) : 419, 1958

Gliricidia Maculata as an alternate host for *Ceuthorhynchus Asperulus*, Faust

Ceuthorhynchus asperulus, Faust (Curculionidae) is a pest on Redgram (*Cajanus indicus*), an important pulse crop grown in South India. It is commonly known as the redgram bud weevil. Adults and grubs of this weevil feed inside the tender flower buds and destroy them preventing pod formation. So far this pest has been noted only on redgram. Recently the author during his investigations on the biology of this weevil at Coimbatore, noted this insect breeding in good numbers inside the flower buds of *Gliricidia maculata* an important green manure plant grown in this tract. The adults and the grubs were found feeding inside the flower buds of this plant with the result a large number of flowers dropped down thus preventing pod formation. This is the first record of an alternate host for this weevil.

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T. R. SUBRAMANIAN.

Hints on Growing Grapes.

Grape is a delicious and nourishing fruit. It thrives well in the dry regions of South India. It needs a dry climate with rainfall generally not exceeding 30 inches. Humidity, rainfall and frost during the flowering and the fruiting seasons are harmful to grape, as they aid in spread of diseases. A cool rainless dry weather favours excellent growth of grape. The best season for starting vineyards is therefore the period from January to June, when rains are less common.

Requirements of grape :

1. Grape needs red soils of coarse texture of 2 to 3 feet depth. Gravelly red soils called "Chalkas" are suitable for grape growing.
2. Sticky clay soils, alkaline and saline soils are unsuitable.
3. Land with fair degree of slope which facilitates easy drainage and free flow of sub-soil water is necessary.
4. Sweet water, rich in calcium is essential. Brackish water or salt water is injurious.
5. Tracts with strong winds, heavy monsoons, cyclone or hill — storms, should be avoided.

1. **Varieties :** **Bhokri** is the leading common variety of India. It is a prolific bearer and yields 15,000—20,000 lbs. per acre. The fruits are green and moderately sweet. The berries are round and possess a papery skin. It is cultivated extensively in Nasik (Bombay State) and Madurai (Madras State). It is planted in rows 6—7 feet apart and in each row the plants are spaced 3 feet apart and trained on horizontal wires. Four arms are trained on to rows of horizontal wires running at 2' and 4' above ground level. This system is called "Kniffin system". Bhokri is also grown on a support of "Pangra" Badsha (*Erythrina indica*). The support trees are planted with a spacing of 7' x 7' and are allowed to grow upto a height of 6 feet. This is the single stake system. In Madurai, Bhokri is called Patcha draksha and is grown largely on bowers. (Pandals)

2. **Anab - E -- Shahi** is the best grape for quality and yields. It fetches highest price compared to all other varieties. Each bunch weighs from 1½—2 lbs. The berries are big sized. This is vigorous spreading variety and is therefore trained on overhead bower. This is the best dessert grape grown on a commercial scale in India.

Hints on Growing Grapes

3. **Bangalore Blue** bears bluish purple berries. This is in good demand for juice making. It is grown in about 1000 acres in and around Bangalore. It is trained on horizontal wires on overhead bowers.

4. **Kishmish** or **Thompson** seedless is a raisin grape. This is poor bearer compared to all other varieties. The fruits have thin silky skin. This is the sweetest grape among the several varieties grown in India.

5. **Other Varieties :** Gulabi or Karachi is a scented grape. Kandhari is a purple grape. Fakri and Sahabi are fancy varieties grown on a limited scale.

Establishment of a Vineyard :

1. The area should be protected with a good fence to ensure safety of the crop.
2. The spacing depends on the variety chosen and the system of training. For Anab - E — Shahi variety spacing of 24' x 12' on the overhead bower system is adopted.
3. Mark out points 12' apart length wise and crosswise. Leave alternate rows on any one side. Dig pits 3' x 3' in the months of December—January.
4. Burn one or two baskets of dried neem leaf in each pit. Red earth or tank silt and old farm yead manure should be added at ½ cart load per pit. Mix the following ingredients and fill in each pit :

(a) Well rotten farm yard manure (sieved)	10 basket loads
(b) Red earth or tank silt	10 " "
(c) Castor or neemcake	6 lbs.
(d) Bonemeal	4 "
(e) Wood ash	2 basket loads

Irrigate once to allow material to settle. After one week, rooted grape cuttings are to be planted.

Planting the Grape :

1. Use vigorous growing rooted cuttings. Scope out earth in the centre of the pit and plant the rooted cutting exactly in the centre of the pit.
2. Tie the growing shoot to a bamboo the bottom of which is coated with tar. Use a thin strip of banana fibre for tying at every foot height, as it grows.
3. Allow one mainshoot to grow along the bamboo support to a height of 6—8 feet.

4. Remove all side sprouts and prevent branching on the mainshoot of the vine.
5. When the vine reaches the bower, nip the main shoot.
6. Allow two side branches to spread horizontally on opposite sides over the bower.
7. Promote branches to come at every 1-1½ feet over the bower. Tie the branches regularly and train them once a week. Remove all tendrils with scissors.

Pruning and manuring of grape: When the grape is two year old and the stem has attained the thickness of the wrist, it can be treated for crop bearing. Pruning is a seasonal operation done in grapes to secure good crop and to regulate its growth. It is pruned twice a year, once in summer and a second time during winter. Winter pruning is done with a view to promote the crop during non-rainy season as this is favourable for development of bunches.

Summer pruning: In the month of April, all leaves are removed first. The new shoots or current season shoots of amber colour and of pencil thickness only are cut back to one leaf, leaving one bud.

Winter pruning: In October, irrigation has to be withheld at the close of the North East Monsoon for about three weeks. The vine is allowed to rest and starve. The leaves turn yellow and gradually dry up. Remove all leaves and prune-back all shoots retaining 3 to 5 buds or about 5-6 inch length shoots. Before pruning in winter spray the Vineyard thoroughly with Bordeaux mixture (5:5:50) twice at 3-4 days intervals.

Manuring: The following manures should be mixed thoroughly and applied in a finely powdered form around each plant in an area of 4 feet square, immediately a day after pruning in April:

	Per vine.
(a) old sieved Farm yard manure	5 — 10 baskets.
(b) Castor or neem cake (powdered)	6 lbs.
(c) Steamed bonemeal or fishmeal	5 lbs.

Again in October, a day after winter pruning the following manures have to be applied:

Farm Yard manure (sieved)	10 baskets.
Castor or neemcake	6 — 10 lbs.
Steamed bonemeal	4 lbs.
Pot. sulphate	2 — 4 lbs.
Amm. Sulphate	½ — 1 lbs.
Super Phosphate	2 lbs.

Dig 4"- 6" deep all-round the vine and keep the plants for a fortnight without irrigation. After pruning apply the manures and irrigate immediately very profusely. The manurial dosage can be increased by 25 per cent every year from the time the grapes come to bearing.

Irrigation :

1. Whenever manures are applied irrigate profusely.
2. Irrigate vines ones in 3—5 days. In summer irrigation may be given on alternate days.

Protection of crop :

1. Four weeks after pruning in October, new shoots develop with flower clusters.
2. Do not use any spray at this stage, as flowers are liable for damage.
3. Dust Geigy 1250 mixture at 4 oz. per vine using a fine dust. This will control aphids, jassids and bark insects.
4. Diseases may appear on flower cluster. Do not disturb clusters until berries set.

Securing healthy Bunches :

1. When berries develop to the size of Jonna, (Cholam) seed, spray fish oil soap, 1 oz. in 3 gallons of water to control jassids. Repeat spray, if necessary a fortnight later.
2. Examine clusters for mildew diseases. Use fungi copper at 1 oz. in 3 gallons to protect bunches against anthraenose later.
3. Use a tin can and dip the bunches once in ten days for a few seconds.
4. Use scissors and regularly remove malformed and damaged berries.
5. Spray 5:5:50 Bordeaux mixture at 60 gallons (15 kerosene tins) per acre at weekly intervals after berries have attained pea stage.

Care of the Crop :

1. Protection of the individual bunches can be done with paper bags.
2. In commercial vineyards watchmen have to be employed to look after the crop against damage by birds, squirrels, jackals, etc.,

Harvest:

1. Vines pruned in October will be ready for harvest in the first week of March.
2. Pluck each bunch with scissors when the seed inside becomes visible. The berries attain uniform size and become semi transparent. Anab-e-shahi variety develops amber colour on ripening.
3. Withhold water a week before harvest in order to increase sweetness.

Packing and storage:

1. After harvesting dress each bunch to proper shape and remove all overripe, dried up or diseased berries. The trimmed bunches are graded according to the size and maturity.
2. Use straw, cork or green leaves and pack the grape in alternate layers in bamboo baskets or earthen pots.
3. Store grapes in a cool place or in a refrigerator for 2 or 3 weeks.
4. Juice, jam, Jelly, can be made from ripe grapes and pickles out of unripe grapes.

[From the Ministry of Community Development, Government of India, New Delhi.]

Letters to the Editor.

To the Editor, M. A. S. U.

When I visited the Government of India, Central Rice Research Institute at Cuttack (Orissa State) in the month of October, 1956, the rice crop of the strain T. 1242, grown in a large area, arrested my attention by its luxuriant growth, profuse tillering and long ear-heads with a number of white kernelled grains. I obtained one pound of this strain and cultivated it as a garden land crop under well irrigation in wet lands belonging to a farmer, Sri Ramasubramania Pillai, Vizayanarayanan, in Tirunelveli District as the tank commanding this land did not have water due to failure of monsoon. The method of cultivation adopted is as follows:

On 24th October, 1956, about one pound of seed was sown in a well prepared and manured seed bed of about one cent with a view to getting sturdy and tillered seedlings. Robust seedlings with purple sheath fit for planting were obtained within a month's time.

On 26th November the seedlings were uprooted and transplanted in singles in a well puddled land in lines. The distance between lines was nine inches. Within lines, single seedling was planted per hill at a distance of six inches. An area of 6 cents was covered by the robust seedlings from about one pound of seed. The planted area of 6 cents received $1\frac{1}{2}$ cart loads of farm yard manure, $\frac{1}{2}$ cart load of green leaf, *Cassia auriculata*, 221 lbs. of mixed fertilizer ($N_{12}P_6$) before the final puddling and this works out to about 8 tons of farm yard manure, 3 tons of green leaf and 360 lbs. of mixed fertilizer containing 43 lbs. Nitrogen and 22 lbs. P_2O_5 per acre.

When the seedlings established themselves well, about three weeks after planting the Japanese weeder was worked in between the lines. This weeder, while working, not only stirs the puddled soil but also buries the small weeds. A month after planting, hand weeding was also done. Before weeding 4 lbs. of urea was applied so that it might be worked into soil while weeding. The Japanese weeder was worked three times, once a fortnight, till a month before the flowering of the crop.

The crop planted in singles put up a number of tillers and covered the ground, each hill having about 20 tillers. But at the time harvest, each hill had about 10 ear-bearing tillers.

This crop, sown on 24th October in nursery and planted on 26th November 1956, came to uniform flowering during the last week of January 1957 with long ear-heads, the length of ear-head ranging from 8 to 12 inches.

Since there was no water in the tank, the land was irrigated copiously with well water lifted by mhote. Thereafter the soil was kept moist by irrigation till the crop flowered and its grains showed signs of maturing. The crop was wetted 16 times from of puddling to its maturity.

The crop was harvested on the 2nd March 1957 and yielded 240 lbs. of paddy (96 M. M.). This works out to 4000 lbs. per acre. The duration of this crop under the local conditions during the season october to february is about 130 days.

The cultivation of this rice variety even as a garden land crop is profitable and a farmer could earn a net profit of Rs. 392 from an acre. It is, therefore, requested that farmers who have irrigation facilities grow rice with a view to step up production of this staple food.

The cost of cultivation of rice and its income is given below :

	Rs.	nP.
1. Cost of one pound of seed	0	15
2. Preparation of one cent of nursery, manuring and sowing seed	0	50
3. Irrigating the seed bed 7 times (one mhoth in a day can irrigate 36 cents)	0	50
4. Preparing the land dry ploughing 6 times puddling 2 times (14 pairs needed for 1 acre @ Rs. 2.50 per acre)	2	10
5. Trimming bunds, uprooting seedlings and planting (For 1 acre, 14 women @ 75 Np/ per woman and 2 men @ Re. 1/- per man	0	80
6. Working Japanese weeder thrice (for 1 acre once Rs. 2 -)	0	37
7. Weeding 8 women/acre @ 50 Np/woman	0	25
8. Irrigating the crop 16 times (for 1 acre 3 mhothes required, @ Rs. 2.50 per mhoth and for irrigating 50 Np)	8	64
9. Harvesting, threshing and cleaning (for 1 acre 8 men @ Re. 1/- per man for 6 men @ Re. 1/- per man for threshing and 2 men @ Re. 1/- per man for cleaning)	0	96
10. F. Y. M. and Green leaf	9	00
For 6 cents total	23	27

Therefore the cost of cultivation for 1 acre comes to Rs. 387-83

Income: Paddy 240 lbs. (96 M. M.) @ 16 Np/lb. ... Rs. 38-40

Straw 350 lbs. @ Rs. 1-25/100 lbs. ... Rs. 4-37

For 6 cents Total ... Rs. 42-77

Therefore for 1 acre the income comes to ... Rs. 712-83

The profit per acre is Rs. 325/- (Rs. 712-83 — Rs. 387-83)

Yours faithfully,

M. S. RAMAKRISHNAN,

Agricultural Demonstrator, Tenkasi.

Weather Review — for October, 1958.

RAINFALL DATA (IN INCHES)

Division	Station	Total rainfall for the month	Departure from normal	Total since 1st January 1958
North	Madras (Moonambakkam)	16.9	+ 4.9	30.7
	Tirurkuppam*	14.1	+ 6.3	30.5
	Vellore	9.0	+ 2.2	31.5
	Gudiyatham*	7.4	+ 2.2	29.7
East Coast	Palur*	8.3	— 0.3	22.2
	Tindivanam*	12.4	+ 5.9	26.8
	Cuddalore	11.9	+ 0.4	30.5
	Nagapattinam	6.3	— 4.3	12.8
	Aduthurai*	8.5	+ 2.0	19.9
	Pattukkottai*	6.2	— 0.3	26.2
Central	Salom	5.5	— 0.9	31.1
	Coimbatore (A. M. O.)*	3.5	— 2.1	15.5
	Coimbatore	4.2	— 2.1	17.0
	Tiruchirappalli	5.2	— 1.1	19.2
South	Mathurai	3.5	— 3.9	17.4
	Pamban	4.5	— 4.0	15.1
	Koilkatti*	3.9	— 2.1	16.6
	Palayameottai	4.5	— 2.6	17.6
	Ambasamudram*	3.9	— 1.6	23.4
	Nagerecoil*	4.2	— 1.3	33.0
Hills	Kodaikanal	7.0	— 3.2	43.1
	Coonoor*	4.2	— 6.8	42.2
	Ootacamund*	4.0	— 6.2	40.5
	Nanjanad*	3.1	— 6.0	52.3

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

Dry weather prevailed throughout Madras State on the first day of this month. An easterly wave moved into the Andaman Sea on 2-10-'58, advanced slowly towards west and concentrated to a deep depression lying 200 miles east south east of Madras on 7-10-'58, causing widespread rains in Madras State. The deep depression weakened off north coromandal coast and got filled up on the very next day. Rainfall was local in Madras State, on 8-10-'58. A 'low' was seen over south Mysore on the same day, which moved westwards into the Arabian Sea and concentrated to a depression off North Konkan coast on 9-10-'58. Rainfall occurred only at a few places in Madras State on 9-10-'58, followed by dry weather for two days. Unsettled conditions were observed in the east central and adjoining Bay of the Bengal on 11-10-'58 and they became less marked on the very next day. An easterly wave moved into Andaman Sea on 15-10-'58 and accentuated the seasonal trough to a depression on 17-10-'58, 200 miles southeast of Masulipatam. Under its influence rainfall occurred locally in Madras State for four days from 14-10-'58 and was fairly widespread in coastal Madras State on 16-10-'58. The depression weakened to a low pressure area on 21-10-'58 and persisted for one more day. A trough of low pressure existed in the south east Arabian Sea off the Malabar coast on 22-10-'58, but became unimportant on the next day itself. Rainfall occurred at a few places in Madras State from 18-10-'58

to 29-10-'58, except on 24-10-'58 when it occurred locally. An easterly wave moved across the Comorin area on 28-10-'58. Another wave caused unsettled conditions in the southwest Bay of Bengal on 30-10-'58 and fairly widespread rains in Madras State. Rainfall was scattered on the last day of the month.

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

Noteworthy rainfalls			
S. No.	Date	Name of place	Rainfall in inches
1.	7-10-1958	Tirurkuppam	5.2
2.	7-10-1958	Madras (Meenambakam)	5.7
3.	7-10-1958	Vellore	4.6
4.	7-10-1958	Cuddalore	4.0
5.	16-10-1958	Aduturai	3.9

Zonal rainfall (in inches)			
Name of Zone	Rainfall for October, 1958	Departure from normal	Remarks.
North	11.9	+ 3.9	Above normal
East Coast	8.9	+ 0.6	Just above normal
Central	4.6	- 1.6	Below normal
South	4.1	- 2.6	Far below normal
Hills	4.6	- 5.6	"

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

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

Departmental Notifications

Gazetted Officers—Madras Agricultural Department.

Postings and Transfers during the month of November 1958.

Name and Designation	Transferred or Posted to
Sri M. Kandaswamy, Lecturer in Mycology	Earned leave for 19 days from 29-9-1958 and extension for 30 days.
„ G. K. Chidambaram, Asst. Agrl. Chemist	Posted as Asst. Agrl. Chemist, Coimbatore on the expiry of his leave.
„ F. L. Danial, Asst. Agrl. Chemist	Asst. Agrl. Chemist (Saline and Alkaline lands Reclamation), Coimbatore.
„ S. V. Kuppaswamy	Leave on average pay for one month from date of relief.
„ B. W. X. Ponnaiya, Millets and Pulses Specialist	Extension of leave for 40 days from 7-11-58.
„ N. Sankaranarayana Reddi, Asst. Agrl. Engineer (Civil)	Appointed to act temporarily as Agrl. Engineer, Director of Agriculture's Office.
„ T. S. Palanivelu, Agrl. Engineer, Director of Agri. Office	Appointed to act temporarily, as General Superintendent, Government Industrial Engineering Workshops, Madras, Vice C. S. Sreedaran.
„ S. Varadarajan, Addl. Lecturer in Chemistry, A. C. & R. I.	Lecturer in Chemistry, Coimbatore.
„ T. S. Lakshmanan, Addl. Lecturer in Chemistry	Additional Lecturer No. 1.
„ R. Soundararajan, Lecturer in Chemistry	Additional Lecturer No. 2.
„ N. Ranganathachari, Addl. Lecturer in Agrl., A. C. & R. I.	Lecturer in Agriculture, A. C. & R. I.
„ M. Damodara Prabu	Addl. Lecturer in Agriculture, A. C. & R. I.
„ R. Veeraswamy, Asst. in Millets, Coimbatore	Asst. Millets Specialist from the date of taking charge.
„ N. Ramaswamy, Farm Manager, L. R. S., Hosur	Appointed to act temporarily as Fodder Development Officer.

Upper Subordinate -- Agricultural Department

Postings and Transfers during the month of November 1958.

Name and Designation	Transferred or Posted to
Sri Jacob Paramanandan, Fieldman	Promoted as E. O. for Agri. Ottapidaram, Tirunelveli District.
„ M. Natarajan,	„ as A. D., Oddanchatram.
„ S. Hariharan,	„ Spl. A. D., (Cotton) Kadambur.
„ A. Michael,	„ E. O. for Agri., Thandoni, Trichy.
„ K. P. Krishnan,	„ Entomology Asst., Coimbatore.
„ T. M. Kanakasabai,	„ E. O. for Agri. Vrichettipalayam, Trichy District.
„ M. K. Vittoba,	„ E. O. for Agri., Sholinger, North Arcot District.

Name and Designation	Transferred or Posted to
Sri N. Muthuswamy, Fieldman	Promoted as E. O. for Agri., Avoor.
„ G. Lakshminarasimhan, „	„ E. O. for Agri., Kanai, South Arcot District.
„ C. D. Anandapadmanaban, „	„ Farm Manager, Central Farm, Coimbatore.
„ V. Narayanaswamy, „	„ E. O. for Agri., Bhuvanagiri, South Arcot District.
„ Y. P. Annuswami, „	„ E. O. for Agri., Tirupattur.
„ R. Palaniappan, „	„ Spl. A. D., (Cotton) Udumalpet.
„ A. Chidambaram, „	„ E. O. for Agri., Edapadi, Salem Dt.
„ V. Ranga Rao, „	„ Spl. A. D., (Khadi) Udumalpet.
„ P. Arumugam, „	„ E. O. for Agri., Pernamallur.
„ K. Ramachandra Rao, „	„ Agrl. Instructor, Refresher Course, Coimbatore.
„ S. K. Karuppannan, „	„ Agriculture Demonstrator, Mettupalayam.
„ N. V. Raman, Upper Subordinate	Assistant at the A. C. & R. I. for training gardeners and youngmen belonging to backward classes.
Kumari P. Padmaja, Asst. in Entomology	Resignation accepted from 1—10—1958.
Sri S. V. Arumugam, P. P. Asst., Sattur	Spl. A. D., (Cotton) K. 5 scheme, Sullur.
„ M. Guruswamy, Spl. A. D., Sullur	Spl. A. D., Udumalpet.
„ A. Narayanan, Asst. in cotton	Services loaned to the Indian Central Cotton Committee from date of relief.
„ K. Ayyaswamy, A. D. Udumalpet,	Horticultural Dev. Asst., Tirunelveli.
„ K. A. Shanmugavelu, Spl. A. D., (Sugarcane) Mannargudi	„ „ Madurai.
„ M. M. Sankarankutti, A. D., Villivakam	„ „ Guindy.
„ P. G. Thomas, Ex. A. D., Tiruchendur	Resignation accepted from 12—9—1958.
„ R. Venkataswamy, Upper Subordinate	Asst. in Millots, A. C. & R. I.
„ I. Usman Khan Ghori, Supervisor, R. E. T. C., T. Kallupatti	E. O. for Agri., Usilampatti.
„ S. K. Pandian, E. O. for Agri., Usilampatti	Extension Officer for Agri., K. Paramathy, Karur.
„ C. Sankaran, E. O. for Agri., K. Paramathy	Farm Supervisor, R. E. T. C., T. Kallupatti, Madurai District.
„ V. Varatharajan, Asst. in Entomology, Paddy stem borer scheme, Alandurai	Resignation accepted from date of relief.
Kumari K. Janaki, Asst. in Mycology	„ „ „
Sri K. Khaleel Ahmed, Asst. in Chemistry, A. C. & R. I.	Asst. to the Agricultural Meteorologist, Coimbatore.
„ K. T. Narasimhan,	Posted as Asst. in Chemistry A. C. & R. I.
„ V. Sivarama Sethu, Ex. Officer for Agri., Musiri	Resignation accepted from 13—9—1958.
„ K. Nanjayyan, A. D., Valavanur	Posted as Plant Protection Assistant, Villupuram.
„ R. Govindarajan, P. P. Asst., Villupuram	Posted as Extension Officer, for Agri., Villupuram.



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

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

Tirupur : Coimbatore District : Season : There was a rainfall of 30.5 cms. at Tirupur and rains were widespread throughout the district during the month. The rains were helpful for cotton sowing and for other standing crops. The earlier sown cotton crop in Pollachi and Coimbatore areas is reported to be fair.

Arrivals and transactions : Lint : The market at Tirupur started with an opening balance of 9049 candies of Cambodia and 2275 candies of Karunganni lint during the month. The total arrivals into Tirupur Market were 3769 candies of Cambodia and 1346 candies of Karunganni which included 1247 candies of Cambodia and 33 candies of Karunganni locally ginned. Despatches from Tirupur accounted for 5690 candies of Cambodia and 1118 candies of Karunganni lint which were sent to Madras, Salem, Tanjore, Dindigul and places in Bombay, Kerala and Andhra Pradesh States. The market closed at the end of the month with a quantity of 7128 candies of Cambodia and 2503 candies of Karunganni lint.

Kapas : During the month the kapas market started with an opening balance of 16341 pethis of Cambodia and 2253 pethis of Karunganni kapas. The total arrivals into Tiruppur Market were 9849 pethis of Cambodia and 835 pethis of Karunganni kapas. The disposals during the period were 16679 pethis of Cambodia and 1924 pethis of Karunganni kapas, in the market area at Tirupur. At the end of the month the market closed with a stock of 9511 pethis of Cambodia and 1164 pethis of Karunganni kapas.

Prices: Prices for cotton were reported to be steady. The price ranges were as follows:

	Lint (per candy of 784 lbs).	Kapas (per pothi of 280 lbs).
Cambodia superior quality	Rs. 900—981	Rs. 135—148
„ average „	Rs. 810—870	Rs. 120—130
Karunganni superior „	Rs. 871	Rs. 127

Ramanathapuram District: Season: Meagre rainfall was recorded during the month throughout the district. The rainfall recorded during the month at Virudhunagar and Sattur amounted to about 4.92 and 1.53 cms. respectively. Sowings of Karunganni crop has come to a close in the district. The standing crops were reported to be satisfactory.

Arrivals and transactions: The following were opening stocks, arrivals, disposals and closing stocks of both kapas and lint in important markets in the district during the month.

Kapas in pothis of 280 lbs:				
Opening stock	Arrivals	Total	Disposals	Closing balance
500	1,200	1,700	1,500	200

Lint in candies of 784 lbs:				
340	170	510	310	200

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

Kapas in pothi of 280 lbs.	
Karunganni	... Rs. 88—96
Tinny Karunganni	... Rs. 81—88
Tinny	... Rs. 66—75

Lint in candy of 784 lbs.	
Karunganni	... Rs. 706—790
Tinny Karunganni	... Rs. 658—701
Tinny	... Rs. 570—650

Seeds in Maund of 82 2/7 lb:	
Karunganni	... Rs. 10.33—12.00
Tinny	... Rs. 12.33—12.75

South Arcot: Season: Wide spread rains were received during the month. The standing crops were reported to have been highly benefited by these rains.

Arrivals and transactions: Kapas: Arrivals amounted to 564 pothies while despatches to other districts came to 527 pothis. The stock with the trade at the end of the month stood at 94 pothis.

The average price per pothi of 280 lbs. kapas worked out to Rs. 106.10 at Villupuram and 113.31 at Panruti.

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

South Arcot District: Arrivals and transactions: Arrivals of summer groundnut declined during the month. The district produce amounted to 1930 tons while receipts from other districts like Pollachi, North Arcot, Salem, Tiruchirapalli and Madurai came to 707 tons. Imports from other States totalled 104 tons. Consumption by mills and chekkus came to 2259 tons and 293 tons respectively. Exports to Pondichery and despatches to other districts like Madras, Chingleput and Tanjore amounted to 37 tons and 492 tons respectively. Wastages were calculated at 205 tons. The stock with the trade of the end of the month stood at 1207 tons.

The average prices at the several markets ranged from Rs. 167.10 to 179.55 per candy of 531 lb. according to quality.

North Arcot District: Season: Rains received during the month, continued to be widespread and fairly heavy, almost throughout the district.

Arrivals and transactions:

	Opening balance	Arrivals	Disposals	Closing balance
Groundnut kernels				
(in Tons) ...	533	1007.5	1390.5	150
Groundnut pods (in Tons) ...	1197	209	469	937

Prices: The prices of groundnut and its products were on the increase when compared with the previous month.

The following were the prices for groundnut and its bye-products during the month of October, 1958 compared to September, 1958.

	October, 1958.	September, 1958.
Groundnut kernels (Cdy. of 531 lbs.)	Rs. 180—203	Rs. 150—167
Groundnut oil (Cdy. of 500 lbs.)	Rs. 345—358	Rs. 328—340
Groundnut pods (Bag. of 80 lb.)	Rs. 10—19	Rs. 15—17
Groundnut cake (Md. of 82 2/7 lb.)	Rs. 11—12	Rs. 8—9.25

Ramanathapuram District: Arrivals and transactions: During the month the arrivals were on the decrease. The groundnut market was active and brisk throughout the month with good demand.

The following were the opening stock, arrivals, despatches and closing stock of groundnut kernels at Virudhunagar Market during October 1958.

	Opening stock	Receipt	Disposals	Closing stock
Kernels (in cdy. of 531 lbs.)	600	3550	4100	50

Prices: The following were the price range that prevailed for groundnut pods, kernels, oils and oil cakes during October, 1958 compared to last month September, 1958.

	October, 1958	September, 1958.
Groundnut pods (Bag. of 80 lbs.)	N. R. ...	N. R. ...
„ kernels (cdy. of 531 lbs.)	Rs. 170—200	Rs. 175—195
„ oil (cdy. of 500 lbs.)	Rs. 335—350	Rs. 325—350
„ oil cake (Mds. of 82 2/7 lbs.)	Rs. 11.00—12.50	Rs. 10.33—12.33

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

South Arcot District: Arrivals amounted to 2004 bags besides 445 bags received from other districts like Tiruchi and Madurai. Despatches to Madras and Tanjore came to 880 bags. Consumption by chekkus came to 1221 bags. The stock with the trade at the end of the month at 1460 bags.

The average prices per bag of 168 lbs. raised from Rs. 57.00 to 67.19 according to quality.

Tobacco: (In this section tobacco is in candies of 500 lbs.).

Coimbatore District: Arrivals and transactions: At the end of the month under reports there was a stock of 9605 candies of chewing and 680 candies of cheroot tobacco. About 4900 candies of chewing and 300 candies of cheroot tobacco were reported to have moved to South Arcot, North Arcot, Madurai, Salem, Tirunelveli, Tiruchirappalli, Ramanad and Nilgiris in of Madras State and to places in Mysore, Bombay, Kerala and Andhra States.

Prices: The prices of tobacco showed an upward trend. The price ranges during the month were as hereunder:

Prices in Rs. per candy of 500 lbs.			
Variety	I Grade	II Grade	III Grade
1. Chewing tobacco (Sun-cured):			
(a) Meenampalayam	400—480	275—350	175—265
(b) Other varieties	300—375	225—250	150—200
2. Cheroot varieties:			
Sun-cured grown in Erode and Bhavani taluks	230—440	210—250	140—200
3. Chewing tobacco:			
Pit cured grown in Palladam and Sular areas.	250—330	180—235	80—145

Cardamom: Arrivals and transactions: During the month there was a good rainfall in the Cardamom plantation areas in Madurai district.

Arrivals of Cardamom in all the important assembling markets like Pattiveeranpatti, Bodinaickanoor, Thevaram, Pannaipuram, Kombai, Uttamapalayam, Cumbum and Gudaloor were heavy. The despatches to other States is also reported to be heavy.

The estimated arrivals and stock position of cardamom during October, 1958 were as hereunder:

Name of Centres.	Quantity in lb.		
	Estimated Arrivals.	Despatches.	Closing balance.
1. Bodinaickanur	... 2,36,000	2,52,000	23,000
2. Thevaram	... 45,000	43,000	5,000
3. Pannaipuram	... 35,000	35,000	10,000
4. Kombai	... 25,000	24,000	7,000
5. Uthamapalayam	... 26,000	23,000	5,000
6. Cumbum	... 70,000	45,000	50,000
7. Gudaloor	... 20,000	13,000	10,000
8. Pattiveeranpatti	... 70,000	64,000	13,000
9. Virudhunagar	... 60,000	66,000	12,000
	5,87,000	5,65,000	1,35,000

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

Prices in Rs. nP. per lb.

(a) Bodinaickanoor:

Trade Varieties:

(1) Green (bulk)	Rs. ...	8.06 to 8.59
(2) Green (extra bulk)	„ ...	8.67 ...
(3) Shipment	„ ...	8.00 ...
(4) Splits	„ ...	
(5) Seeds	„ ...	12.00 ...

(b) Thevaram:

(1) Green bulk	Rs. ...	8.48 to 9.00
(2) Green inferior	„ ...	8.31 to 8.38
(3) Green extra bulk	„ ...	9.13 to 9.56
(4) Green bold quality	„ ...	9.75

(c) <i>Pattiveeranpatti:</i>		Price in Rs. nP. per lb.	
I <i>Sundried:</i>			
(1) Superior or Medium and bulk	Rs. ...	9.27 to	9.83
(2) Inferior and small	" ...	8.85 to	9.02
(3) Others	" ...	7.72 to	8.34
II <i>Store Green:</i>			
(1) Superior and bulk	" ...	10.17 to	10.89
(2) Medium	" ...	9.42 to	10.15
(3) Inferior	" ...	8.96 to	9.36
(4) Extra bold	" ...	12.34 to	13.00
III Splits	" ...	8.30 to	8.54
IV Lights	" ...	6.16 to	7.00
V Seeds	" ...	11.87	...
(d) <i>Virudhunagar:</i>			
(1) Green bulk	" ...	8.50 to	8.60
(2) Green (extra bulk)	" ...	9.00 to	9.15
(3) Bold qualities	" ...	9.50 to	9.75
(4) Shipment	" ...	8.00	...
(5) Seeds	" ...	11.50 to	11.75

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Review of administrative activities of Market Committees during October, 1958.

General: The Market Committees of South Arcot, North Arcot, Coimbatore and Trichy continued to function during the month. The Market Committees of Ramanathapuram and Tirunelveli have not started functioning.

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

Name of the Market Committees	Section 5 (1)		Section 5 (3)		Weighmen	
	A	B	A	B	A	B
South Arcot Market Committee	132	2159	98	1557	89	1443
North Arcot Market Committee	326	1610	309	1364	105	658
Coimbatore Market Committee	107	1341	83	1066	43	604

A = Licence issued during the month.

B = Licence issued up to the end of the month.

Meetings: An ordinary meeting of South Arcot Market Committee was held on 27—10—1958. Seven members attended the meeting. Twenty two subjects were disposed of at the meeting.

The seventh ordinary meeting of North Arcot Market Committee was held at Gudiyatham on 18—10—1958. An important resolution was passed requesting the Government to notify sugarcane (Jaggery) as a commercial crop under section 3 of the Madras Commercial Crops Markets Act and notify the same under section 4 in North Arcot District.

Quality Analysis: Nil.

Quality Competition: Nil.

MARKETING AGMARK PRODUCTS

The following articles are at present graded and Marked under Agmark seals in accordance with the provisions contained in the Agricultural Produce (Grading and Marking) Act, 1937 by the authorised Agmark Packers of the State as per the list furnished periodically to the Heads of Departments with reference to the Government Order cited.

AGMARK RICE :

- (a) Par boiled varieties, — kattasamba, white sirumani, Nellore Samba, (Special grade and A grades) Kitchili Samba, Co. 25 Nellore Samba, Red Sirumani,
- (b) Raw varieties: Kitchili Samba, Nellore Samba, (Special grade and A grade)
 2. Agmark Ghee: Special grade and General Grade.
 3. Agmark Potatoes: Extra Special and Special grade.
 4. Agmark Gingelly: Grade I and Grade II.
 5. Agmark Groundnut Oil: Refined Grade I and Grade II.
 6. Agmark Eggs: Extra Large, Large, Medium and Small.
 7. Agmark Oranges: Tight and skinned.
 8. Sandalwood Oil:

List of Stockists of authorised Agmark packers in Madras State for the Quarter Ending 30th September, 1958.

RICE :

1. The Tiruchirapalli Urban Co-operative Society Limited, Teppakulam, P. O. Tiruchirapalli.
2. M/s. M. Subbaiah Chetty and Sons, Kannan Rice Mills, Beemanagar, Tiruchirapalli.
3. Sri M. N. K. Meenakshisundaram Chettiar, Sri Mahalakshmi Rice Mills, Rice Merchant, Tiruvarur, (Tanjore District).
4. Sri Gopal Chettiar, Rice Merchant, Sakkottai Post, Kumbakonam, (Tanjore District).
5. Sri Kannikaparameswari Rice & Asoka Oil Mills, P. B. No. 289, Shevapet, Salem.
6. M/s. M. K. K. Ramaswamy Chettiar Bros. & Co., (via) Erode.
7. M/s. A. Mohana Mudaliar, S. Kannappa Mudaliar & Co., Arni, (North Arcot District).
8. Sri V. R. Viswanatha Iyer, Rice Merchant, Polur, (North Arcot District).
9. Sri M. S. Venkatarama Iyer, Rice Merchant, Kuttalam, Tanjore District.
10. Sri M. Kandaswamy Pillai, Rice Merchant, Jyothi Mills, Attur, Salem District.

11. Sri K. V. Nagaraja Iyer, Rice Mills, Thevoor, Nagapattinam, Tanjore District.
12. Torapadi and Allupuram Co-operative Stores Ltd., Torapadi, No. 153, Azad Road, Torapadi, Vellore Taluk, North Arcot District.
13. Sri M. Govindan, Rice Mills, Door No. 7, A/Arni Road, Arcot, North Arcot District.
14. The South Arcot District Co-operative Supply & Marketing Society Ltd., No. 1487, Cuddalore N. T., South Arcot District.
15. Sri Ramachandra Iyer, & Sri V. R. Vanchinatha Iyer, Rice Mill, Chidambaram.
16. M/s. Trichy Oil Mills, Ariamangalam, Tanjore Road, Kattur Post, Tiruchirapalli.
17. Sri V. Venkataswaralu, Sri Ramakrishna Rice Mill, No. 89, Buchi Allupatti Village, Villour Post, (Via) Tinnanoor, Chingelput District.
18. M/s. M. M. S. Ramaswamy Chetty & Co., Rice Manufacturers, 74/14, Palladam Road, Tiruppur.
19. The United Rice Mill, Rice Merchant, Achalapuram Road, Coloroon Post, Anikarachatram, Shiyali Taluk, Tanjore Dist.
20. Sri Am. Ibrahim Ali, Government Medical Contractor, 2, Mandapam, Alwarpuram, Tallakulam Post, Mathurai, (Mathurai District).

GHEE :

1. Nambisan's D. V. Diary Farm, 17th Cross Street, Mandavellipakkam, Madras — 28.
2. M/s. Lingam & Co., Ghee Grading Station, Coimbatore.
3. Sri T. M. L. Angappa Chettiar, Ghee & Oil Grading Station, Kangayam, (Via) Erode, Coimbatore District.
4. Sri Venkateswara Laboratories, Analytical and Consulting Chemist, 8/7, R. C. M. Layout, Kattoor, Coimbatore.
5. M/s. Amarchand Gulabchand & Co., Sun Ghee Laboratory & Refinery, No. 52/16, Perumal Koil Street, Tiruppur, (Coimbatore District).
6. M/s. Mathurai Ghee Supplying Co., No. 1, Chinnu Pillai Lane, Mathurai.
7. M/s. Dhanalakshmi & Co., Ghee Grading Station, Shermiyan Sahib Street, Tiruppur, (Coimbatore District).
8. M/s. Raja Venkatram, Ghee Butter Stores, Ghee Merchants, Thomas Street, Coimbatore.
9. Sri R. K. Ganapathy Chetty, Agmark Ghee Merchants, Kangayam (Via) Erode, (Coimbatore District).

10. M. K. Annamalai Chettiar & Co., Ghee and Oil Merchants, Erode Road, Perundurai.
11. Sri A. Muthuswamy, Proprietor of M/s. Ratna Ghee Stores, No. 31, East Car Street, Tirunelveli.
12. Sri S. Narayanaswamy Iyer, Ghee Merchant, No. 95, Javagar Bazar, Karur.
13. Sri M. K. Gopala Konar, Ghee Merchant, 150, Javagar Bazar, Karur.
14. Sri S. Sundaram Chettiar, Ghee Merchant, No. 14, Karur.
15. Sri T. M. Tirupathi Chettiar, Ghee Merchant, No. 26, Old Bazar Street, Karur.
16. Sri E. R. S. Bala Dhandayudham, Ghee Merchant, Dharapuram.
17. Sri A. V. R. Abdul Jabar, Ghee Merchant, Cholokadai Street, Dharapuram.
18. M/s. Sri Murugan Ghee Supply Co., 64, A, Cholokadai Street, Dharapuram.
19. Sri M. A. Hawas, No. 6, Kannar Street, Karur.
20. Sri N. P. Raju, Proprietor, M/s. Jayaram Ghee Stores, 366/3, Cotton Market, Rajapalayam, (Ramnad District).

POTATOES :

1. Sri N. R. Rangaswamy Naidu & Sons, Potatoe Merchants, Hotti, Nilgiris District.
2. Sri P. Madhava Rao, Provision and Vegetable Contractor, 67, Krishnappa Naick Street, Madras—1.
3. The Torapadi and Allupuram Co-operative Stores Ltd., Azad Road, Torapadi, Vellore Taluk, North Arcot District.
4. Sri N. P. Kandaswamy, Potatoes Merchant, Mattupalayam P. O., Coimbatore District.
5. The Tiruchirapalli Urban Co-operative Stores Ltd., R. 619, B. P. No. 357, No. 1, N. S. C., Bose Road, Tiruchirapalli, Tiruchi District.
6. M/s. T. K. Tanikasalam Nadar and Brothers, Government Contractors, 27, Munuswamy Chetty Garden, 3rd Lane, Madras.
7. Sri S. Govinda Pillai, Contractor, No. 60, Trichy Main Road, Dodagapathi, Salem, Salem District.
8. Sri S. Natesan, Pillai, Contractor, 2, Munniappan Koil Street Gogai, Salem, Salem District.

GROUNDNUT OIL :

1. M/s. East Asiatic Co., (Private) Ltd., Madras—1.

GINGELLY OIL :

1. M/s. M. K. K. Annamalai Chettiar & Co., Agmark Gingelly Oil Packer, Perundurai Post, (Via) Erode, Coimbatore District.
2. M/s. T. M. L. Angappa Chettiar, Ghee & Oil Grading Station, Kangayam, (Via) Erode, Coimbatore District.
3. M/s. Lakshmana Oil Mills, Palladam Road, Tirupur (Coimbatore District).
4. Sri R. K. Ganapathy Chetty, Ghee & Gingelly Oil Agmark Grading Station, Kangayam, (Via) Erode, Coimbatore District.
5. S. M. Arunachala Mudaliar & Co., No. 13, Dindugal Road, Karur.
6. Sri A. V. K. Mohamed Abdul Azees Rowther, Andaver Gingelly Oil Mills, Karur Road, Cholokadai Street, Dharapuram.
7. M/s. Sree Murgan Supplying Co., 64, A, Cholokadai Street, Dharapuram.

EGGS :

1. Sri N. Raju Chettiar, Agmark Egg Packer, No. 1, Sami Chetty Street, Komaleeswaranpet, Madras—2.
2. Sri O. S. Syed Mohamed, Wholesale Egg Dealers, No. 10, Francis Turin Street, Madras—1.
3. Sri C. Parameswara Kurup, Travancore Egg Market, 12—A, East Spur Tank Road, Egmore, Madras—8.
4. Sri V. C. Inasu, Agmark Egg Packer, Ooty Municipal Market, Ootacamund (The Nilgiris).
5. Katpadi Co-operative Egg Grading Society, Katpadi, North Arcot District.
6. M/s. Eggs & Poultry Mart, 25, South Coovum Road, Mount Road, Madars.
7. M/s. M. M. Ebrahim & Bros., Egg Merchants, No. 9, Mofuz Khan Garden Street, Madras—1.
8. Sri C. P. Loganathan, Jupiter Egg Mart, No. 9, Spur Tank Road, Chetput, Madras.
9. Sri Lourduswamy, Baker & Egg Merchant, No. 2, Palakkarai Main Road, Tiruchirapalli.
10. The President, The Lattur Co-operative Egg Production and Sale Society Ltd., G. No. 1616, Villalapuram Post, Chingelput, Taluk, Chingelput District.
11. Sri D. K. Sundaraj, Gnana Villa Poultry Farm, Trivandaum Road, Palayamkottai, (Tirunelveli District).
12. Sri T. Sadaya Pillai, Contractor, Government Hospital, No. 2, Munniappan Koil Street, Gogai Salem, Salem District.

EDIBLES OIL-RAW & REFINED GROUNDNUT OIL-WASHED AND REFINED COTTON SEED OIL :

1. M/s. East Asiatic Co., (Private) Ltd., Madras — 1.

ORANGES :

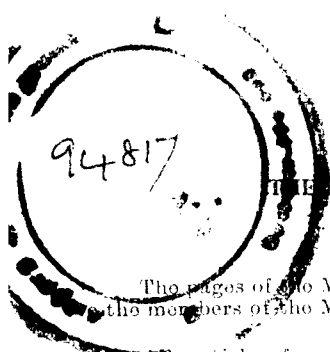
1. The Tiruchirapalli Urban Co-operative Stores Ltd., R. 610, P. B. 357, 1, N. S. C., Bose Road, Tiruchirapalli, Trichy District.

SANDALWOOD OIL :

1. The Indian Sandal Oil Industries, 8-57, Hotel Site, Mettur Dam, Salem District.
2. M/s. The Mettur Sandalwood Oil Co., Post Box No. 1, Mettur, Salem District.
3. M/s. Bharat Essential Oil Co., Trichy Road, Salem, Salem District.
4. M/s. Sri Meenakshi Sandal Oil Distilleries, 18, Pudupet Road, Tirupathur, North Arcot District.

Groundnut Crop—First report—1958-59—Madras State : The area sown with the groundnut crop in the Madras State up to July 1958, is estimated at 2,18,700 acres. Compared with the area of 2,15,300 acres estimated for the corresponding period of the previous year, the current year's estimate shows an increase of 1.6 per cent. The present estimate shows an increase of 7.3 per cent when compared with the average area of 2,03,900 acres calculated for the five years ended 1959-'58. A decrease in area is estimated in the district of South Arcot, Tiruchirappalli and Tanjore. An increase in area is estimated in the other districts of the State except North Arcot, Ramanathapuram and Kanyakumari where the area estimated is the same as that for last year and Tirunelveli and the Nilgiris district where the area under the crop is nil or negligible. The yield per acre is expected to be slightly below the normal in all the districts of the State. The seasonal factor for the State as a whole works out to 96 percent of the normal as against 98 percent estimated for the corresponding period of the previous year. On this basis, the total yield works out to 1,24,500 tons of unshelled nuts as against 125,000 tons of unshelled nuts estimated for the previous year representing a decrease of 0.4 per cent. Compared with the average production of 1,15,100 tons of unshelled nuts calculated for the five years ended 1957-58, this is an increase of 8.2 per cent. The average wholesale price of groundnut (machine-shelled) per standard maund of 82-2/7 lb or 3,200 tolas as reported from certain important market centres on 1st August 1958, was Rs. 24-80 at Salem, Rs. 27-28 at Coimbatore, Rs. 27-58 at Cuddalore and Rs. 28-67 at Vellore. Compared with the prices which prevailed during the corresponding period of the previous year, the current prices reveal a fall of 5.8 per cent at Salem and a rise of 3.5 per cent at Coimbatore, 4.7 per cent at Cuddalore and 14.2 per cent at Vellore.

Sugarcane First Forecast Report—1958-59 : The area under sugarcane in the Madras State upto 25th May, 1958 is estimated at 63,250 acres (51,590 acres under planted crop and 11,660 acres under ratoon crop). Compared with the area of 60,250 acres (54,280 acres under planted crop and 5,970 acres under ratoon crop) estimated for the corresponding period of the previous year and the average area of 57,370 acres calculated for estimated for the five years ending with 1957-58, the present estimate shows an increase of 5.0 percent and 10.2 percent respectively. A decrease in area is estimated in North Arcot district. The area estimated is the same as that for the previous year in the districts of Chingleput and Tirunelveli and an increase in area is estimated in the other districts of the State except the Nilgiris and Kanyakumari, where the area under the crop is little or negligible. The condition of the crop is reported to be generally satisfactory in all the districts except in North Arcot where the crop is reported to have been affected by drought. The average wholesale price of cane jaggery in important market centres per maund of 82 2/7 lbs. or 3,200 tolas on 6-6-1958 was Rs. 16-46 in Tanjore; Rs. 16-45 in Tiruchirappalli; Rs. 14-69 in Coimbatore; Rs. 14-61 in Madurai; Rs. 14-50 in Vellore; Rs. 12-84 in Salem and Rs. 11-89 in Cuddalore. Compared with the prices which prevailed in the corresponding period of the previous year, the prices show a fall of 2.9 percent in Cuddalore and 4.9 percent in Salem and an increase of 0.1 percent in Tanjore; 0.5 percent in Coimbatore; 3.9 percent in Vellore; 18.8 percent in Madurai and 11.9 percent in Tiruchirappalli.



THE MADRAS AGRICULTURAL JOURNAL

Hints to Contributors

The pages of the Madras Agricultural Journal shall be open ordinarily only to the members of the Madras Agricultural Union.

All articles for publication should be addressed to the Editor, Madras Agricultural Journal, Lawley Road P. O., Coimbatore.

In view of the high cost of printing, contributions should be as concise as possible and should conform to the best usage in the leading Journals published in India and abroad.

Manuscripts should be typed with double spacing on one side of the paper only and with wide margin. They should not ordinarily exceed 5,000 words or 12 pages of printed matter including tables and illustrations in the Journal. Manuscripts should be carefully revised; numerical data and calculation checked. Main headings in the text should be typed in capitals with paragraph indentations and followed by a period and two hyphens. Sub-heads should be lower case and be underlined to indicate italics. Latin nomenclature and local terms etc., should be in italics. Original papers must conclude with a summary of not more than 300 words, drawing attention to the main facts and conclusions.

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