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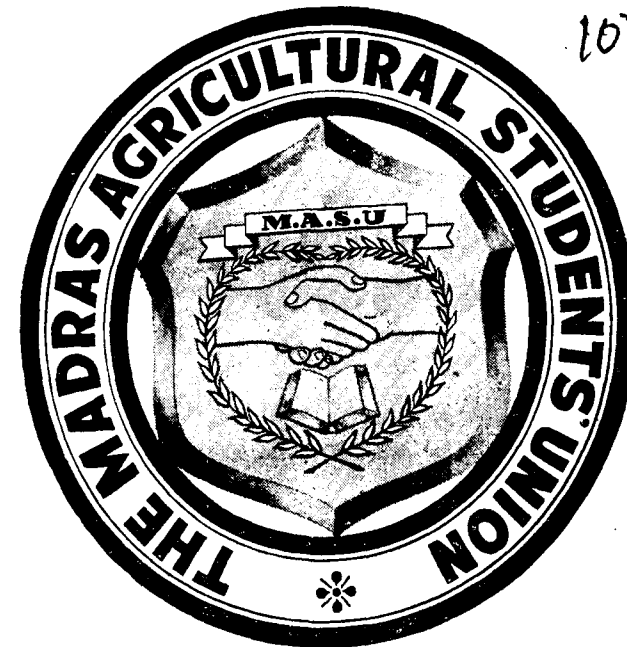


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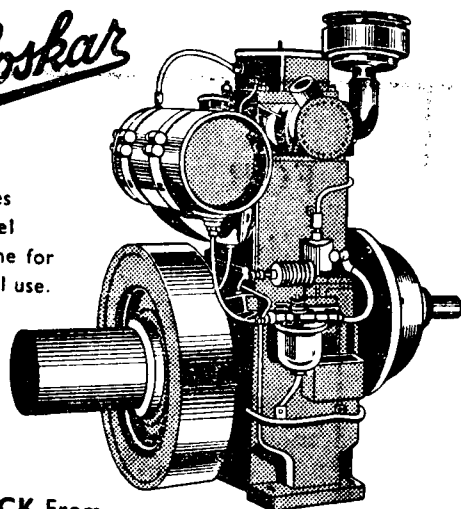
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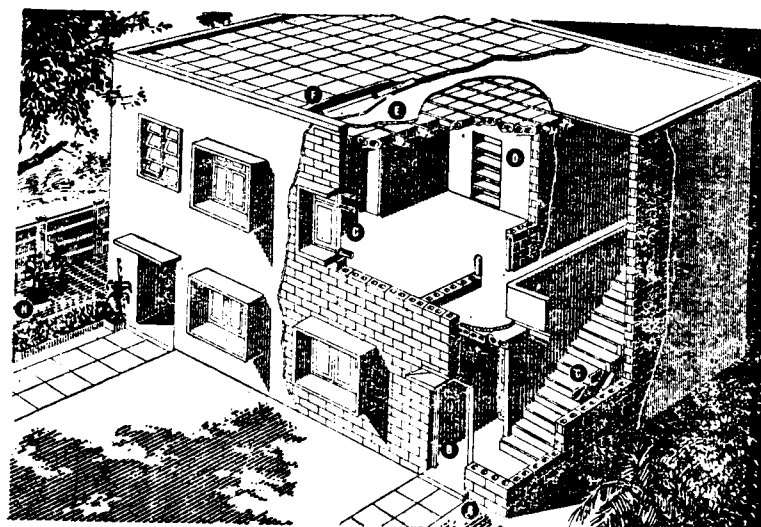
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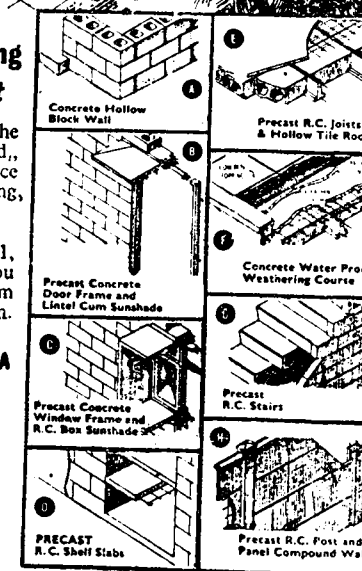
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The Madras Agricultural Journal

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Editorial

107

Agricultural Exhibitions and Fairs: With the approach of the cold season, the Agricultural Department teems with activity for participating in exhibitions. The Congress Exhibition at Madras has been a regular feature for the last decade which had sought to enlist the histrionic talents of the exhibitors. During the last two years, however, there have been very great efforts to make the stalls in the World Agricultural Fair, Delhi and the current one at Calcutta as attractive as possible.

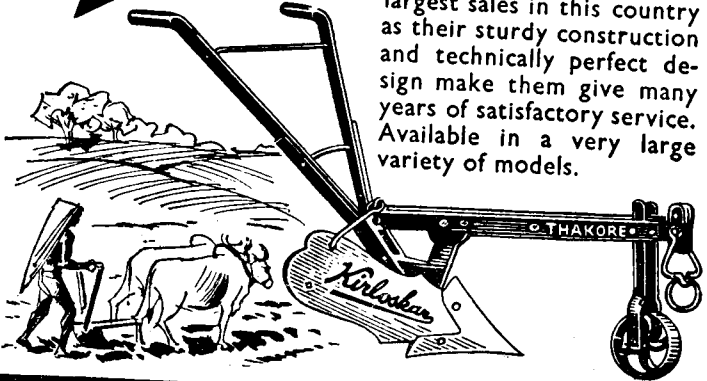
In days gone by agriculture was learnt in a traditional way. The village folk passed on their ripe experience to posterity and had contributed in building up a set pattern for each locality. Any deviation from the pattern was thought to result in disaster and so was not easily accepted.

Agricultural propaganda has been in existence in this country for the past half a century on the lines adopted in advanced countries. In recent years the techniques have undergone radical changes. Audio-visual aids having been boomed up in various branches of industry and trade as very effective means of selling their wares, have been introduced on a wide scale in putting forward the agricultural achievements to the cultivators. All modern resources have been pressed into service to make the propaganda attractive and easily understood by anyone. Thus the written language has now been replaced by a visual 'language'.

One of the important factors for keeping this type of propaganda alive is its newness. Everytime it is exhibited there has to be a change and new ideas have to be ushered in. Recent exhibitors have shown that there is enough material and artistic innovations to make the stalls catch the eye of the public. The appreciation given to the Madras Stall in the Delhi exhibition last year will bear out this fact in full measure.

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To many who were not able to see the Delhi exhibition it was as much etherial as any of the events happening in other parts of the world. The persons who have to be 'educated' are the cultivators. Therefore if the exhibitions are made attractive in New Delhi or Madras it would not have much value. It would be desirable to have the exhibitions in the villages for the benefit of the tillers of the soil.

In recent years agricultural exhibitions and fairs have been conducted in all districts in the Agricultural Research Stations. Some of them have been put up during certain important festivals. It has to be stressed that these exhibitions in rural areas have to be arranged with as much thought and effort as those in the metropolis.

Prefabricated and mobile exhibitions have been well known and have been adopted by many exhibitors. Recently the "Atoms for Peace" show toured many parts of the world with prefabricated material and was a great success. Similarly trade utilised mobile shows for promoting their products. The Calico tent show was taken to all the important cities in South India and attracted the attention of the people. If such methods are adopted for agricultural shows also the desired effect of carrying the propaganda to the rural parts can be achieved. The money and energy spent will be well worth its while.

Studies on the effect of Micro-Nutrients on the yield of Potato

by

M. MAHALINGAM, K. RADHAKRISHNA ALWA and
T. R. NARAYANAN

Introduction : On the Nilgiris though the potato crop receives higher doses of the major nutrients, viz., Nitrogen, Phosphorus and Potash (80 N + 200 P₂O₅ + 100 K₂O), per acre, the average yield is comparatively low. In view of the emphasis of recent studies on the importance of micro-nutrients in plant growth, it was found necessary to ascertain whether the low yield is due to lack of certain micro-nutrients.

Review of Literature : Though the importance of micro-nutrients has definitely been proved, the results of field trials vary due to the fact that their requirement in very small quantity is sufficient and their presence in different soils vary. Malenev (1954) reports increase in yield of tubers due to treatment with manganese and copper from early varieties. The report of Chisholm and Maceachern (1954) and Johnson *et al* (1956) indicate the lack of response to additional application of micro-nutrients. Vlasyuk and Bakmet'eva (1958) report from their studies that spraying the leaves with 0.01 to 0.25% solution of salts of copper, zinc, manganese and boron increased the tuber yield, the effect of copper and manganese being the highest.

Materials and Methods : As the previous trials at this Station with copper and zinc individually were not found to be beneficial, different combinations, of the micro-nutrients, copper, zinc, manganese, boron and molybdenum were tried. Two modes of applications namely (1) To soil along with the fertilizer mixture below the seed in the furrows (i. e., the fertilizer mixture and the micro-nutrients were applied to furrows and covered over with a thin layer of soil over which the seed tubers were placed and covered) and (2) Foliar application in a single spray about 35 days after sprouting were studied. The details of the treatments and the dosage of the micro-nutrients studied in the trial are given below :—

Details of combinations	Dosage for soil application	Dosage for foliar application
	per acre	per acre
1. Control		
2. Cu, Zn, B, Mn and Mo	Copper sulphate	20 lb.
3. Cu, Zn, B, and Mn	Zinc sulphate	10 lb.
4. Cu, Zn, B, and Mo	Borax	40 lb.
5. Cu, Zn, Mn and Mo	Manganese sulphate	10 lb.
6. Cu, B, Mn and Mo	Sodium molybdate	5 lb.
7. Zn, B, Mn and Mo		2 lb.

There were two series in the trial for the soil and foliar applications and each series was laid out in randomised replicated plots with seven treatments replicated 6 times. The popular variety Great Scot was used in the trial and all the treatments received a basal dressing of 80 pounds N, 200 pounds P_2O_5 and 100 pounds K_2O supplied by 200 pounds Ammonium sulphate, 500 pounds Groundnut cake, 350 pounds of Bone meal and 672 pounds of Superphosphate and 224 pounds of Potassium sulphate per acre.

Presentation of Data: The trial was conducted during the autumn season of 1957-'58 and the summer and autumn seasons of 1958-'59. The summary of the results are given below :

SUMMARY OF RESULTS

Soil application.

Treatments	1	2	3	4	5	6	7	'Z' test satisfied or not	Critical difference	Standard Error
<i>* Autumn season 1957-'58</i>										
Acre yield in lb.	...	5,600	5,733	5,466	5,466	5,466	6,133	No	...	863.6
Percentage over Control	...	100.0	102.4	97.6	97.6	97.6	107.1	...	...	15.4
<i>* Note:</i> The crop suffered due to severe incidence of brown rot hence the results should be viewed with caution.										
<i>Summer crop 1958-'59</i>										
Acre yield in lb.	...	17,467	13,033	12,200	12,133	16,833	13,133	12,467	Yes	1,495
Percentage over Control	...	100.0	74.6	69.8	69.5	96.4	75.1	71.4	...	8.5
Conclusion: <u>1, 5, 6, 2, 7, 3, 4</u>										
<i>Autumn crop 1958-'59</i>										
Acre yield in lb.	...	13,867	6,500	7,700	7,100	13,300	7,567	7,433	Yes	1,572
Percentage over Control	...	100.0	46.9	55.5	51.2	95.9	54.6	53.6	...	11.3
Conclusion: <u>1, 5, 3, 6, 7, 4, 2</u>										

Foliar application.

Treatments	1	2	3	4	5	6	7	'Z' test satisfied or not	Standard Error
<i>* Autumn crop 1957-'58</i>									
Acre yield in lb.	...	7,066	7,066	6,666	6,000	5,866	7,466	No	873.6
Percentage over Control	...	100.0	100.0	94.3	84.3	83.0	105.7	...	12.3
<i>Summer crop 1958-'59</i>									
Acre yield in lb.	...	13,000	14,067	14,267	12,933	13,700	14,667	No	1818.4
Percentage over Control	...	100.0	108.4	109.7	99.5	105.4	112.8	...	14.0
<i>Autumn crop 1958-'59</i>									
Acre yield in lb.	...	12,467	11,933	11,667	11,500	12,500	12,433	No	710.8
Percentage over Control	...	100.0	95.7	93.6	92.2	100.3	99.7	...	5.8
<i>* The crop suffered due to severe incidence of Brown rot and hence the results should be viewed with caution.</i>									

The results of the three seasons concur in that there is no beneficial effect due to the additional application of micro-nutrients irrespective of the mode of application.

Discussion: The additional application of micro-nutrients either to soil or as foliar spray had little effect in increasing the yield of tubers. This lack of response may be due to the presence of certain micro-nutrients in the fertiliser ingredients like superphosphate used in the potato fertilizer mixture.

Besides, when the micro-nutrient mixture was applied to soil (under the tubers at sowing) it had some deleterious effect as reflected by the significantly low yield. This deleterious effect may be due to the presence of boron, as the treatments receiving boron as a component in the micro-nutrient mixture showed the deleterious

effect. In the previous trials at this station though the application of graded doses upto 30 lb. per acre of borax did not produce significant yield increase, there was no deleterious effect. Thus the delayed sprouting and stunted growth of the plants recorded may be due to the effect of excess boron as the dosage adopted in this trial was 40 lb. of borax per acre.

Conclusion : The trials conducted at the Agricultural Research Station, Nanjanad reveal that there is no response in yield due to additional application of micro-nutrients. Injuries possibly due to excess boron on potato crop has been recorded when soil application of 40 lb. of borax per acre was done.

Acknowledgement : The authors express their thanks to the Superintendent, Agricultural Research Station, Nanjanad, for his help in the conduct of this trial.

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A Comparative Study of Cowpea (*Vigna sinensis*) and Clusterbean (*Cyamopsis psoraloides*) as Green Manure Crops for Gardenlands

by

S. PREMSEKAR, B. SC., (Ag.) and A. SUBRAMANIAM, B. SC. (Ag.)
Agricultural College and Research Institute Coimbatore-3.

Introduction : The role of leguminous crops in crop rotation is well known. Since they have the capacity to fix the atmospheric nitrogen in the soil, legumes form the chief source of organic nitrogen available at a low cost. The desirable attributes of a good green manure crop are easily decomposable green matter rich in nitrogen and good vegetative growth within a short period of 60 days, so that it can easily fit into the gardenland rotation. At present, sunnhemp is universally grown as a green manure crop in the gardenlands of Coimbatore because of its short duration. Earlier study had focussed attention on Clusterbean as a good green manure crop in place of sunnhemp, because it provides the grower with a rich harvest of readily marketable green pods, before it is incorporated into the soil at 60 days growth (Veeraswami and Kunjamma, 1958). In another field study, Clusterbean C. P. 177 was fixed as the type best suited for the green manure due to its heavy vegetative growth and yield of green matter (Subramaniam and Premsekar, 1960).

Cowpea is another quick growing legume which is rich in nitrogen. It produces heavy foliage which is used as green manure to enrich the soil and also as green fodder for feeding cattle. In South India, it is mainly grown for its pods and grain. Due to its rapid vegetative growth it covers the ground very well and serves as a good cover crop for smothering weeds and to prevent soil erosion. The crop can also be ploughed in situ during its vegetative growth for green manure purposes. The entire plant dried to a moisture content of 11 per cent, contains 1.95% nitrogen, 0.52% phosphoric acid and 1.47% potash (Yegnanarayana Iyer). On original moisture basis it contains 0.7% of nitrogen (Yegnanarayana Iyer). The grain is extensively used in the form of *dhall* to supplement the cereal diet and it contains about 24% protein (Yegnanarayana Iyer). There are two distinct types of cowpea; the grain type *Vigna sinensis* grown in drylands and vegetable type *Vigna sesquipedalis* grown in gardenlands. The vegetable type produces superior quality pods which are fleshy, sweet and about a foot in length.

Among the grain types maintained at the Millet Breeding Station, type C. 521 was found to put forth a luxuriant growth both under rainfed and irrigated conditions. Detailed studies were made to assess the utility of cowpea C. 521 as a fodder cum green manure type.

Materials and Methods: A preliminary trial was conducted during 1960 summer season under irrigated conditions for estimating the yield of the fodder type C. 521 using seed rates ranging from 20 to 80 lb. per acre. The plots were randomised and replicated five times. Each plot was of 15 x 15 link size. The treatments were 20, 30, 40, 50, 60, 70 and 80 pounds seed rate per acre. The plots were irrigated immediately after sowing and subsequent irrigations were given once in a fortnight. One hand weeding and hoeing was given during the initial stages of crop growth. A second weeding was not found necessary as the crop was able to cover the ground effectively and smother the weeds completely. The crop was cut on the 60th day after sowing and yields of green matter recorded for different treatments.

A similar trial with clusterbean green manure type C. P. 177 with seed rates ranging from 20 to 60 lb. was also laid out during the same period, under irrigation. The plots were randomised and replicated four times using seed rates of 20, 30, 40, 50 and 60 pounds per acre. As in cowpea, the crop was cut at 60 days growth and the yield of green matter recorded. The yield data in respect of both the crops are presented below:

TABLE I.

Green Manure yield of cowpea C. 521.

No. S.	Seed rate per acre	Acre yield of green matter in lb.	Percentage increase over the general mean	Money value per acre in Rs.
1.	20 lb.	22,578	91.5	126
2.	30 lb.	22,933	92.9	128
3.	40 lb.	23,377	94.8	130
4.	50 lb.	25,956	105.2	145
5.	60 lb.	26,133	105.9	146

TABLE I. (Contd.)

No. S.	Seed rate per acre	Acre yield of green matter in lb.	Percentage increase over the general mean	Money value per acre in Rs.
6.	70 lb.	26,667	108.1	149
7.	80 lb.	25,067	101.6	140
General Mean		24,607	100	138
Standard Error		876	3.5	...
Critical difference		2551	10.3	...

Conclusion: 70 60 50 80 40 30 20

Note: 1. Cowpea contains 0.7 lb. of nitrogen per 100 lb. of green matter.
2. One lb. of nitrogen is valued at 80 nP.

TABLE II.

Green Manure yield of Clusterbeans CP. 177.

No. S.	Seed rate per acre	Acre yield of green matter in lb.	Percentage increase over the general mean	Money value per acre in Rs.
1.	20 lb.	14,444	96.7	81
2.	30 lb.	14,667	98.2	82
3.	40 lb.	14,889	99.7	83
4.	50 lb.	15,778	105.7	88
5.	60 lb.	14,889	99.7	83
General Mean		14,929	100	84
Standard Error		489	3.1	...
Critical difference		...	...	...

Note: 1. Clusterbean contains 0.7 lb. of N per 100 lb. of green matter.
2. One lb. of nitrogen is valued at 80 nP.

Discussion: From the above data it may be seen that in respect of cowpea, the yield of green matter increases steadily upto 70 lb. seed rate per acre when it attains the maximum. There is a trend for a lower yield at 80 lb. seed rate per acre. But the differences in yield of green matter between 50, 60 and 70 lb. seed rates are not significant.

Similarly in the Clusterbean trial, the yield of green matter attained the maximum with 50 lb. seed rate per acre and thereafter at 60 lb. there was a decrease. This is in conformity with the earlier findings that 40 to 50 lb. seed rate is optimum for sowing clusterbean as green manure crop (Subramaniam and Premsekar, 1960).

This comparative study of cowpea and clusterbean in the yield of green matter reveals that cowpea is superior to clusterbean. Further in respect of total money value on the basis of nitrogen content of green matter, cowpea gives a better return than clusterbean.

Summary: The utility of cowpea C. 521 and clusterbean C. P. 177 as green manure crop was studied using different seed rates per acre. The maximum yield of green matter was recorded for 70 lb. seed rate in cowpea and 50 lb. seed rate for clusterbean. The tonnage of green matter per acre at 60 days growth was higher for cowpea than that of clusterbean. It may be concluded that cowpea is better suited as green manure than clusterbean because of the higher yield of green matter, better smothering effect and higher total nitrogen added to the soil.

Acknowledgment: The authors are tankful to Sri S. G. Aiyadurai, Millet and Pulses Specialist for his suggestions and help in the preparation of this paper.

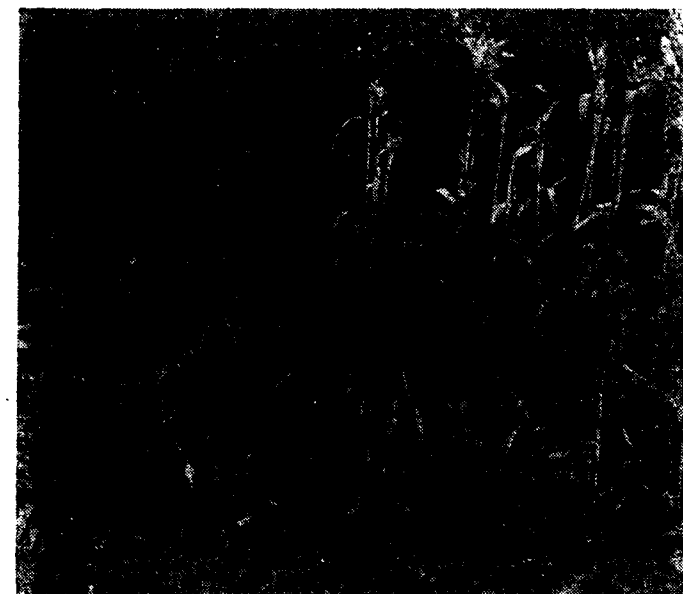
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Research Notes

An economic short duration mutant in Talaivirichan Cholan (*Sorghum roxburghii* var. *hians* Stapf).

Sorghum roxburghii var. *hians* Stapf is a cultivated grain Sorghum variety of major importance in the Madras State. Five economic and improved strains viz., Co. 2, Co. 3, Co. 19, TPT. 1 and TPT. 2. are now under spread, the first three evolved at the Millet Breeding Station, Coimbatore, and the latter two at the Regional Millet Station, Tiruppatur. Of these, the two strains Co. 19, and TPT. 1 are pearly grain mutants spotted in a chalky population of Co. 2. These strains are sown in July-August, mature in 145 days and are season bound. Irrespective of the season in which they are sown, they reach the reproductive phase only in the month of November-December. When sown early, the vegetative phase is prolonged. In this paper is described an early mutant which was spotted in a Co. 19 population.



Note that the strain Co. 19 is in the vegetative phase while the early mutant Co. 19/1 is in the flowering phase.

In the monsoon season of 1958 in a bulk crop of Co. 19, there arose a single plant which differed markedly from the parental strain. It matured a month earlier and was shorter than the strain Co. 19 in height. The seed from this plant was collected and sown in the summer of 1959. The mutant flowered in 75 days indicating a break from the season bound nature characteristic of Co. 19. The strain which was sown along with

the mutant continued to grow vegetatively and did not reach the reproductive phase when the mutant reached maturity and was harvested. The mutant was again raised in 1959 monsoon season in comparison with Co. 19. The crop was sown on 24-8-1959. Details regarding the yield, duration and other vegetative and grain characters are recorded.

Comparative study of the strain Co. 19 and Co. 19/1. (the mutant).

Particulars	Co. 19.	Co. 19/1 (the mutant)
1. Height of the plant in c m.	... 264.5	215.0
2. Number of leaves	... 12.0	8.0
3. 4th leaf length in c m.	... 71.8	51.1
4. 4th leaf breadth in c m.	... 6.1	4.8
5. Panicle length in c m.	... 24.1	23.3
6. Panicle breadth in c m.	... 8.6	13.8
7. Peduncle thickness in c m.	... 0.55	0.52
8. Yield of grain per acre in lb.	... 750	1562
9. Duration in days	... 140	110

From the table it is seen that the mutant flowered, as in the summer season, in 75 days, was shorter in stature than the parent strain and had a lesser number of leaves which were shorter and narrower than the strain Co. 19. One of the components that goes to make up the height of the plant which in turn is related to the duration is the number of the internodes. With the reduction in duration, there has resulted a consequent lessening in the number of internodes and a break away from the season bound habit.

In yield, the mutant recorded 1562 lb. of grain per acre, while strain Co. 19 recorded 750 lb. only. The poor performance of Co. 19 can be attributed to the incidence of the earhead bug, *Calocoris*, which is a common feature in a late sown main crop, the mutant having escaped the attack because of its early maturity. The mutant was sown again in summer 1960 along with strain Co. 19 and it flowered 75 days after sowing while the strain did not even reach the flowering phase at the time of harvest of the former. These observations confirm the nonseason bound habit and the earliness of the mutant which is a distinct advantage since very often the south west monsoon rains are received late and the sowing of a Sorghum crop late in August results in very poor yields.

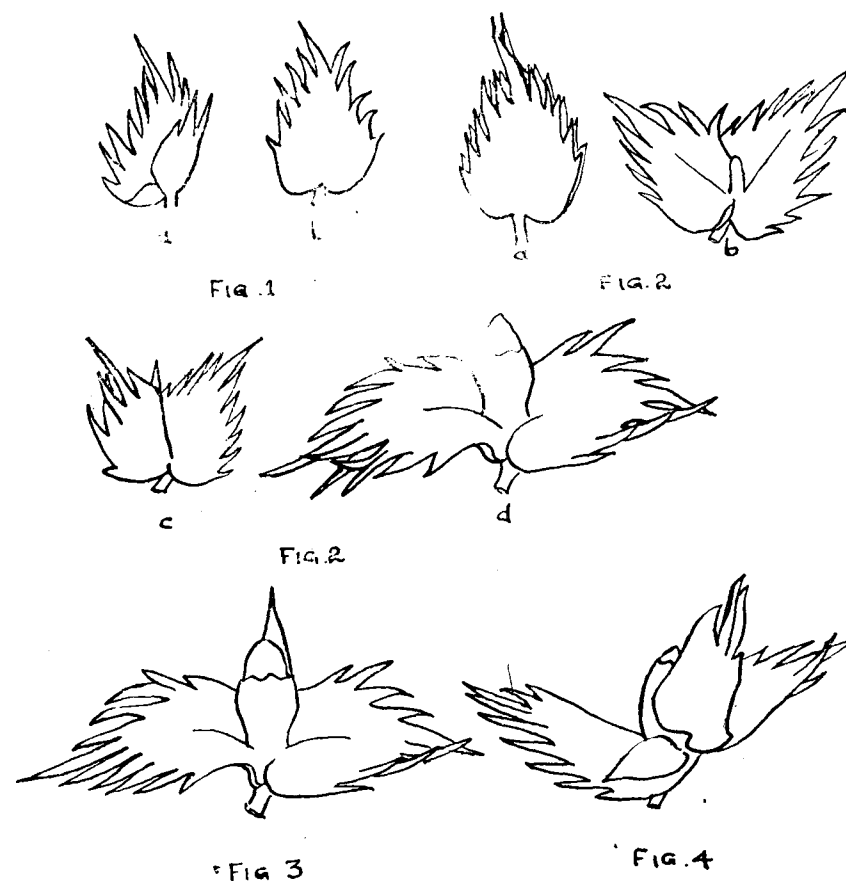
Agricultural College & Research
Institute, Coimbatore-3.

A. SUBRAMANIAN
K. MEENAKSHI
L. SIVAGNANAM.

Floral abnormality in Cotton.

While making detailed study of the cotton cultures in the Unirrigated Cambodia Scheme, Periyakulam, during 1959-'60 season, an interesting observation was made in a selection PK. 1609 from 134 Co. 2 X Meade. Normally the flowers of cotton have three well developed bracteoles. In this particular case the number of bracteoles per flower varied from 1 to 3 and sometimes even more. They differ in size and arrangement. In the same branch the flower buds at the different nodes developed different number of bracteoles. The number of teeth for each bracteole was also not constant and varied. The bracteoles are generally free at the base but in this selection the bracteoles are invariably fused at the base to a length of about 3 mm. and more.

The detailed examination of these squares with varying number of bracteoles revealed that those with single bract did not develop any fruit and the ovary was completely absent [Fig. 1].



The flower buds having two bracteoles are found to develop fruits in 74 percent while the remaining 26 percent buds either have ovary in rudimentary form or absent. The two bracteoles are equal in size and are fused at the base in almost all cases especially where there is the development of ovary [Fig. 2].

The flower buds with three bracteoles always develop fruits but the bracteoles are of different sizes; in certain cases three bracteoles are of the same size or two equal and well developed with the third one as a small one with equal or less number of teeth wedged in between the larger two or appear in a rudimentary form with 1 to 3 teeth [Fig. 3].

The squares with four bracteoles also exist and the size and form of bracteoles vary much [Fig. 4].

There were also some buds with 5 and more bracteoles with different sizes, arrangement and number of teeth.

There were variations in the size and fusion of the bracteoles.

A detailed record was made of the variation in the plant showing such abnormal variation in the bracteole. Out of a population of 770 plants in the Main Strain Trial 456 plants i. e., 59% showed this abnormality, while in the same selection in the Seed Nucleus plot all the plants showed the variation and the percentage of bracteole abnormality varied from 42 to 66%. Fifty single plants were further studied and the squares classified according to the number of bracteoles. The results show that of the total flowers in each plant showing the variation only 4% developed single bract with no ovary, while 26% developed a pair of bracteoles and the other 70% of buds were normal with 3 normal bracteoles and all these developed normal fruits.

Acknowledgment: The author's thanks are due to Sri C. K. Ramachandran, B. Sc., (Ag.), Cotton Specialist, for his valuable guidance in the preparation of this paper.

R. S. ANNAPPAN.

Gleanings.

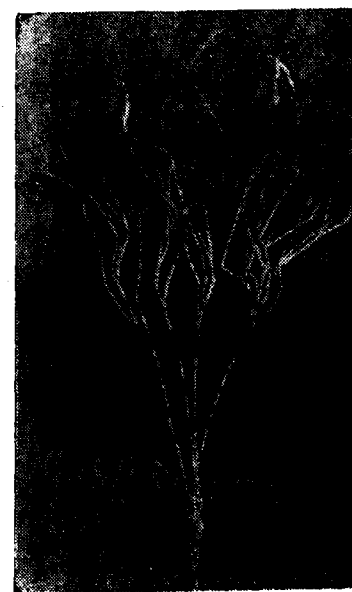
The Motorized wheel: The motorized wheel — a giant wheel with an electric motor mounted in its hub — is a new concept in building commercial and traction vehicles. It is 10 feet high. There is powerful electric traction motor in the hub which gets its supply of current from a diesel-driven generator or a trolley wire. The motor frame remains stationary during use and turns the outer part of the wheel through reduction gearing.

— T. S. Jayaraman. *Globe Press Service.*

Preliminary observations on the tillering of the Rice plant under deep water conditions

In Madras State, there are about 30,000 acres in Talainayar and Muthupet firkas in Tiruthuraipoondi taluk of Tanjore District where deep water conditions prevail. The level of water rises to about five feet and remains at that level for a period of atleast three months from September to November. The varieties of paddy grown in these areas are Tiruthuraipoondi Kar and Kattuvanam which are not only coarse but yield low. It was therefore considered necessary to evolve high yielding flood-resistant strains to cater to the needs of these areas and this has to be done by introduction, pure line selection and hybridisation with varieties obtained from other States in the Indian Union and other countries. With these objects in view, a Deep Water Rice Research Station was opened at Talainayar, Tiruthuraipoondi taluk, in July 1959. During the course of study at the Research Station, a few preliminary observations were made on the tillering of the deep water varieties which form the subject matter of this research note.

FIG. 1.
Tillering above water level in
deep water variety.



(D. W. R. R. S., Talainayar)

FIG. 2.
Tillering above water level
in Co. 25.



(D. W. R. R. S., Talainayar)

It is a well known fact that the lower portion of the epicotyl region of the germinating rice seed develops into a rhizome, the buds from which develop into tillers later on. As this portion of the plant is in the soil at planting, tillering normally takes place about an inch below the soil surface.

The conditions that favour tillering normally are (1) the reduction of water level in the field immediately after planting and (2) the provision of adequate manure at planting. The depth of water in the field is to be gradually increased with the growth of the seedlings as too much water at the tillering period is found to retard tiller production.

The tillering of the rice plant under deep water conditions is quite different from that under normal conditions. Here the rice plant is subjected to a sudden rise of water a foot or more immediately after planting - which never subsides but increases to several feet as the growth period advances. Thus the plant has to struggle for its existence from the very start in order to keep the leaves above water for carrying on photosynthetic activities. Consequently, tiller production is postponed to an advanced stage in the life of the plant when several secondary and tertiary tillers are produced at the upper nodes of the primary tillers in the aerial region. A typical deep water variety, had four primary tillers and nineteen secondary tillers that had developed above two feet of water level. The tillers had also developed roots for the absorption of nutrients from the water below.

This kind of tillering at the upper nodes in the aerial region instead of in the soil was observed not only in deep water varieties but also in ordinary varieties of rice grown under deep water conditions, though not to the same extent. In the case of the rice variety Co. 25 when grown under deep water conditions, the plants mostly had one primary tiller only with four to five secondary tillers formed eighteen inches above water level in the upper nodes.

Further studies are in progress.

Deep Water Rice Research Station, }
Talainayar.

V. KRISHNASWAMY,
S. THANGAVELU.

College and Estate News

Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture, Agricultural College and Research Institute, Coimbatore has been elected as Syndicate Member of the Madras University.

Dr. Kasemov, Agronomist, Soviet Union, Addressed the Academy of Agricultural Sciences on 1—12—1960.

The students of the second year B. Sc. (Ag.), were on tour to different places in this State for 15 days and returned on 5—12—1960.

The college was closed for the Christmas Holidays from 25—12—1960

Bud and Boll shedding in Irrigated Winter Cambodia Cotton

Bud and boll shedding in cotton has been one of the serious problems in growing cotton successfully. Yet, the problem does not seem to be even appreciated fully, as it is considered that cotton does not normally suffer adversely from fruit drop.

In India, flower and fruit shedding in cotton is of great economic importance. The subject has been under considerable study and investigation. Extensive studies are in progress to increase the fruit-set by treating the cotton crop with chemical hormones and application of plant nutrients and micro-elements to the soil.

Bud and boll shedding is common in cotton, in both indigenous and exotic types. A study was undertaken in the winter-sown irrigated cambodia cotton crop of 1958—'59 season to estimate the percentage of buds that blossomed into flowers and the percentage of buds that set into bolls. The study was conducted on five promising Cambodia strains that were in the advanced stage of trial and the two Madras strains — MCU. 1, the present cultivated strain and 9030 — G, a new strain proposed to replace MCU. 1. The mean data gathered are tabulated below:

From buds to flowers			From flowers to buds		
% of buds that blossomed into flowers	% of buds shed due to insect pests	% of buds shed due to other causes	% of flowers that set into bolls	% of flowers shed due to insect pests	% of flowers shed due to other causes
(1)	(2)	(3)	(4)	(5)	(6)
29.5	30.0	40.5	22.0	51.0	27.0

It is seen from the above table that the percentage of shedding due to causes other than insects is more in the flowering phase of the crop than in the bolling stage. So, any treatment of chemical hormone has to be given at the flowering stage of the crop, so that its effect may be felt when the flowers set into bolls.

The shedding of floral forms due to insect pests is more in the later period of crop life. The shedding due to insect pests is only 30 percent during the flowering phase of the crop compared to 51 percent in the bolling phase. The insect pests commence to attack the plants even at the time of square formation and the damage increases as the stage of cotton crop advances. It is, therefore, essential to commence spraying pesticides on the cotton crop even at the time of square formation and repeat, if necessary, to check the development and spread of the insect pest, the boll-worm.

The higher percentage of shedding of floral forms due to causes other than pests at the flowering phase of the crop, is due to the heavy rains experienced at this stage of the life of the crop. The cotton crop, when planted late in August or early in September, is caught in the North-East Monsoon at the time of flowering.

Only 6.5% of the total squares produced in the Irrigated Winter Cambodia crop finally set into bolls and the remaining were shed either due to insect pests or on account of physiological and mechanical causes, as shown below :

S. No.	Particulars	Squares	Flowers	Bolls
1.	Setting %	100	29.5	5.5
2.	Shedding due to insect pests %	30.0	51.0	
3.	Shedding due to other causes %	40.5	27.0	

The major factors that cause the shedding of floral forms are thus (1) insect pests (2) physiological causes and (3) mechanical injury. The insect pests are easily controlled by timely spraying of pesticides. There is a common belief among ryots that too many sprayings of pesticides produce rank crop growth and even cause the shedding of healthy buds. An observation trial conducted at the Cotton Breeding Station, Coimbatore in 1957-'58 on MCU. 1 Cotton showed that irrigation given the next day after spraying gave 48% increased yield over the normal schedule of irrigation. Though further trials are needed to confirm this, it shows that the fear of the cotton grower is not without any foundation. Detailed studies are, therefore, necessary on the correlation between spraying of pesticides and shedding of floral forms, if any and whether irrigation has any effect in minimising the bud and fruit drop.

Regarding shedding due to physiological causes, extensive trials are under study, to increase the fruit set by treating the cotton crop with chemical hormones and application of plant nutrients and micro-elements to the soil. Whether these treatments affect the earliness index of cotton or the lint quality needs study. The effect of time of sowing cotton on the shedding of floral forms may also be studied.

All these studies are expected to increase the fruit set and the production of cotton thereby.

Coimbatore.

S. KAMALANATHAN.

REFERENCE

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Weather Review — for November, 1960

RAINFALL DATA (IN INCHES)

Region	Station	Total rainfall for the month	Departure from normal	Total since 1st January
North	Madras (Meenambakkam) ...	31.8	+ 17.8	61.0
	Tirurkuppam* ...	32.0	+ 26.0	52.4
	Vellore ...	11.6	+ 3.9	36.7
	Gudiyatham* ...	9.6	+ 6.1	38.2
East Coast	Palur* ...	32.6	+ 22.2	55.2
	Tindivanam* ...	21.0	+ 15.3	41.5
	Cuddalore ...	38.9	+ 23.3	64.5
	Nagapattinam ...	59.3	+ 41.7	94.1
	Aduthurai* ...	29.6	+ 21.4	46.6
	Pattukkottai* ...	18.2	+ 10.5	43.1
Central	Salem ...	4.8	+ 1.0	36.2
	Coimbatore (A. M. O.)* ...	7.4	+ 1.7	20.2
	Coimbatore ...	9.6	+ 5.6	24.6
	Tiruchirapalli ...	9.0	+ 2.0	27.3
South	Madurai ...	12.9	+ 7.2	35.8
	Pamban ...	12.1	+ 0.3	34.3
	Koilkatti* ...	12.2	+ 6.6	34.2
	Palayamcottai ...	14.6	+ 0.7	38.7
	Ambasamudram* ...	19.5	+ 11.2	50.7
	Nagercoil* ...	17.5	+ 9.9	57.1
	Capecomorin* ...	14.2	+ 9.8	52.0
Hills	Kodaikanal ...	16.9	+ 6.7	71.9
	Coonoor* ...	19.7	+ 9.1	81.2
	Ootacamund* ...	9.2	+ 5.2	46.2
	Nanjanad* ...	9.3	+ 5.3	53.9

1. * Meteorological Stations of the Madras Agricultural Department.

The month began with a vigorous North-east Monsoon in the southern parts of Madras State, which had heavy to very heavy rains on 1—11—1960. The showers were only localised on 2—11—1960. Along the Coromandal coast the monsoon was very active for two days from 3—11—1960 giving heavy to very heavy rains practically throughout the State. The monsoon continued to be active for five days from 5—11—1960, during which period fairly widespread showers with scattered heavy falls occurred in the State. A depression developed in the Bay of Bengal-centred at southeast of Nagapattinam on 10—11—1960, the effect of which was felt by heavy to very heavy rains throughout the State. The very next day the depression weakened and only scattered showers were received in Madras State. There after for six days from 12—11—1960, though the monsoon was active, only scattered heavy to very heavy showers were received at a few places in Madras State.

2. On 18—11—1960 only local showers were received. Due to the existence of a depression in the southwest Bay of Bengal, centred southeast of Madras, scattered showers were received in the State on 19—11—1960 and 20—11—1960. A cyclonic storm of small extent crossed the coast near Madras on 21—11—1960,

giving fairly widespread rain on this day. For four days from 22—11—1960 only scattered and localised showers were received. In spite of the formation of a depression in the south-east Bay, centred south-west of Port Blair (300 miles) on 26—11—1960, the weather was mainly dry throughout the State during the period 26—11—1960 and 29—11—1960, both days inclusive. On 30—11—1960 a depression formed in the Bay, centred about 475 miles to the east of Madras, giving only scattered showers in the southern parts of the State.

3. In regard to day temperatures there were no large changes. In fact, they were practically normal throughout the State except on 5, 8, 11, 13 and 14—11—'60. The night temperatures were above normal only on 24—11—1960.

4. The noteworthy rainfalls and Zonal rainfalls for the month of November, 1960 are furnished hereunder.

Noteworthy rainfalls in inches

No.	Date	Name of Place	Rainfall in inches
1.	4—11—1960	Tirur	7.5"
2.	9—11—1960	Nagapattinam	9.5"
3.	"	Aduthurai	6.8"
4.	14—11—1960	Cuddalore	9.5"
5.	"	Palur	6.4"

Zonal rainfall (in inches)

Name of the Zone	Rainfall for November 1960	Departure from normal	Remarks
North	21.0"	+ 13.5	Far above normal
East Coast	33.3"	+ 22.4	"
Central	7.7"	+ 2.6	Above normal
South	14.7"	+ 6.5	"
Hills	13.8"	+ 6.6	"

Agricultural Meteorology Section,
Lawley Road Post, Coimbatore-3.
10th December, 1960.

C. B. M., & K. P. N.

Departmental Notifications

Gazetted Officers—Madras Agricultural Department Postings and Transfers during the Month of December, 1960

Name and Designation	Posted or Transferred to
Sri M. Damodara Prabhu, Lecturer in Agriculture	Leave on Average pay for two months from the date of relief
„ K. R. Nagarajan, Crop and Plant Protection Officer (Ento.) Coimbatore	Plant Protection Officer (Package programme) Thanjavoor
„ S. R. Thyagarajan, Assistant in chemistry	Assistant Agricultural Chemist, Coimbatore
„ G. Murugesan, D. A. O. Trichy (North)	Principal, R. E. T. C., S. V. Nagaram
„ S. V. Hariharan, Soil Conservation Assistant, Kodaikanal	District Agricultural Officer, Salem
„ R. Ramanathan, D. A. O., Salem	District Agricultural Officer, Trichy North
„ C. N. Venkataraman Assistant in Chemistry, Coimbatore	Assistant Agricultural Chemist (Groundnut storage scheme), Coimbatore
„ D. M. Samuel, Asst., Agricultural Chemist (Groundnut storage scheme), Coimbatore	Deputed for training in soil survey at Nagpur for six months from 1—12—'60
„ C. Ratnam, Assistant Agricultural Chemist (Soil survey) Coimbatore	Do. Do.
„ M. Basheer, Reader in Entomology	Leave for 40 days from 5—12—'60
„ N. R. Adyanthiah, C. & P. P. O. (Myco), Coimbatore	Earned leave for 50 days from 12—12—'60
„ V. Venkatasubramaniam, Seed Development Officer, Madras	Earned leave granted for 24 days from 5—1—'61
Dr. S. Kanakaraj David, Lecturer in Entomology, Coimbatore	Crop and Plant Protection Officer (Ento.) Coimbatore Vice. Sri K. C. Chandy Reverted

Upper Subordinates—Agricultural Department Postings and Transfers during the month of December, 1960

Name and Designation	Posted or Transferred to
Sri R. Krishnamurthy, Assistant in Cotton, Srivilliputtur	Research Assistant in Plant Breeding, PIRCOM Centre, Coimbatore
„ V. Balasubramaniam, Coconut Research Station, Veppankulam	Coconut Nursery Assistant, Thiruparai-thurai
„ N. Sundaresan, Coconut Nursery Assistant, Thiruparai-thurai	Coconut Nursery Assistant, Pattukottai



Review of market conditions of commercial crops in the notified area of Madras State for the month of November, 1960.

Cotton :

COIMBATORE DISTRICT : *Season :* The rains were moderate to heavy and widespread throughout the district. The rains were beneficial to the growth of the cotton crop in its early stages. But it is reported that in some areas the young plants were affected to a certain extent due to excessive rains. The standing crop of cotton is otherwise reported to be satisfactory in all over the district. Flowering has set in places where the cotton crop was sown earlier. Hoeing is being given to late sown cotton crops.

Arrivals and Transactions : *Lint :* On 29—10—1960 there was a stock of 30616 quintals of combodia lint in Tiruppur market area. The total arrivals into Tiruppur during the month of November, 1960 (upto 26—11—1960) were 46264 quintals of Cambodia and 15782 quintals of Karunganni lint, which included 9000 quintals of Cambodia and 7891 quintals of Karunganni lint locally ginned. Despatches from Tiruppur were 49781 quintals of Cambodia and 15782 quintals of Karunganni lint. On 26—11—1960 there was a stock of 27099 quintals of Cambodia.

Kapas : On 29—10—1960 there was a stock of 3298 quintals of Cambodia and 2798 quintals of Karunganni kapas in Tiruppur market area. The total arrivals into Tiruppur during the month of November, 1960 (upto 26—11—1960) were 14389 quintals of Cambodia and 2369 quintals of Karunganni kapas. The disposals during the month were 13837 quintals of Cambodia and 2949 quintals of Karunganni kapas. On 26—11—1960 there was a stock 3850 quintals of Cambodia and 2218 quintals of Karunganni kapas.

Prices : The cotton market was steady with prices of kapas and lint registering an upward trend.

	Prices in Rs./nP.	
	November 1960	October 1960
	Quintals	
Cambodia Superior quality	358.20	276—292
Cambodia Average quality	276—300.46	267—276
<i>Kapas :</i>		
Cambodia Superior quality	125.98	114—129
Cambodia Average quality	102—120.76	102—114
Karunganni Superior quality	N. R.	102
Karunganni Average quality	90.55	N. A.

RAMANATHAPURAM : *Season :* Unlike in previous years heavy rainfall was received during the month this year. During the first fortnight, it was raining almost daily. The rainfall was widespread throughout the district. Almost all the taluks of the district overflowed and it was said that this area has not witnessed such heavy rainfall in recent years. The copious rainfall received during the month helped the cotton crop to sprout up, but the quality of the winter groundnut crop got deteriorated to some extent. This rainfall benefitted the late sown spreading variety of groundnuts and facilitated for the easy harvest of the early sown crop.

Arrivals and Transactions : Due to inclement weather the arrivals of Karunganni kapas, lint, uganda kapas, lint and seeds except uganda lint were poor. For Uganda lint the market was active due to the keen demand from Coimbatore Mills.

Due to the continuous rains, the arrivals were only moderate and as such there was a paucity of groundnut kernels for consumption by oil mills. In the absence of clear sky and bright sunshine, the decortication was very much limited and the stocks also got exhausted. This situation gave an impetus in the market for the spurt in the prices of kernels during the middle of the month. But however the commitments were only moderate since the trade anticipated a fall in prices soon after the weather clears when heavy arrivals can be expected. In line with the rise in kernels prices, the prices of oils and oilcakes also moved up. The prices as anticipated showed a downward tendency at the close of the month.

Market Arrivals and Disposals : The following were the arrivals and disposals of kapas and lint in important market of the district during November, 1960.

Kapas : (Pothy 280 lbs.)

Name of Market	Opening Stock	Receipts	Total	Disposals	Closing Stock
1. Virudhunagar ...	1,000	2,500	3,500	3,000	500
2. Sattur ...	...	2,500	2,500	2,500	...
3. Rajapalayam ...	2,500	7,000	9,500	8,000	1,500
Total ...	3,500	12,000	15,500	13,500	2,000

Lint : (In Candy of 784 lbs.)

Name of Market	Opening Stock	Receipts	Total	Disposals	Closing Stock
1. Virudhunagar ...	100	150	250	180	70
2. Sattur ...	150	250	400	300	100
3. Rajapalayam ...	1,650	950	2,600	1,400	1,200
Total ...	1,900	1,350	3,250	1,880	1,370

Prices : The following were the prices that prevailed for kapas and lint during November, 1960 as compared to the prices in October, 1960.

Lint :	November, 1960 (per candy)	October, 1960 (per candy)
Karunganni lint	Rs. ...	Rs. 900 to 971
Karunganni	„ 901 to 980	„ ...
Tinny Karunganni	„ ...	„ ...
Karunganni II Crop	„ 860 to 890	„ ...
Tinny	„ 800 to 851	„ 785 to 871
Uganda Certified	„ 1070 to 1120	„ 1135
Uganda Uncertified	„ 1080	„ 1036

Kapas :

	November 1960 (per pothi)	October 1960 (per pothi)
Karunganni	125—133	120—130
Tinny Karunganni Mix.	...	...
Karunganni II Crop.	87—121	87—118
Tinny	93—118	92—118
Inferior quality	...	...
Uganda I quality	142—158	142—155
Uganda II quality	118—138	118—137

Cotton Seeds (Prices in Maund of 82.2/7 lbs.)

Karunganni	14.69—16.00
Tinny	15.68—17.29
Uganda I quality	11.74—13.38

TIRUNELVELI DISTRICT: *Season :* Heavy rainfall was received during the month under report. Rainfall at the latter half of the period was not very beneficial. Sowing of cotton was completed.

Arrivals and Transactions : The local market was dull since arrivals of karunganni crop almost stopped. The price was almost steady. The price of first sort was about Rs. 110—115 and second sort Rs. 100 to Rs. 105 per pothi of 127 k. g.

Arrival of Uganda cotton to Sankarankoil Market continued to be fair. The price was around Rs. 145/- per pothi of 127 k. g. The price of cotton seed varies from Rs. 48/- to Rs. 50/- per pothi of 127 k. g.

SOUTH ARCOT DISTRICT: *Season :* The North East Monsoon was very active and vigorous during the first fortnight of the month giving copious rains on an unprecedented scale. The standing winter groundnut crop did not suffer any irreparable damage generally. The crop which was ready for harvest was however affected by excessive rains resulting in deterioration of quality.

Arrivals and Transactions : The heavy rains received during the month gave a set back to the progress of harvest and arrivals to the markets. There were arrivals largely in the second fortnight. Arrivals gained momentum by the end of the month and are expected to be in full swing in December, 1960 and January, 1961.

Prices : Prices of groundnut kernels were on the upward trend due to meagre supplies till the last week when prices tended to decline due to increased arrivals. Gingelly prices shot up in the last two weeks in spite of good arrivals due to keen demand from outside the district. Cotton prices improved in the first fortnight but declined in the second fortnight.

Cotton Kapas : Villupuram and Panruti markets received in all 645 candies. Despatches to Tiruppur in Coimbatore District amounted to 653 candies. A quantity of 220 candies was left with the trade at the end of the month. The average price per candy of 360 k. g. worked out to Rs. 309.60 at Villupuram market.

Groundnut :

SOUTH ARCOT MARKETS: Harvest of winter crop was delayed on account of incessant and heavy rains during the month under report resulting in smaller arrivals to the markets. The receipt from district produce amounted to 3305 tonnes and from other districts mainly from Tiruchirapalli to 387 tonnes. Despatches to other districts (viz) Madras, Thanjavur, Coimbatore, Ramnad, Chingleput, Salem, Tiruchirapalli and Tirunelveli came to 955 tonnes. Exports to Pondicherry State totalled

127 tonnes. A quantity of 1789 tonnes and 221 tonnes was crushed in oil mills and country chekkus respectively. Wastages were calculated at 215 tonnes. The stock with the trade at the end of the month stood at 2074 tonnes.

The prices were on the decline and ranged from Rs. 51.30 to Rs. 61.50 per bag of 80 k. g. according to quality.

RAMANATHAPURAM DISTRICT: During the month the arrivals, sales and stock of pods and kernels in the district were as follows:

Name of Market	Opening Stock	Arrivals	Disposal	Closing Stock
Groundnut Pods (in Tons)				
Virudhunagar	...	1000	800	200
Groundnut Kernels (in candy of 531 lbs)				
Virudhunagar	900	2400	2800	500

Prices: The following were the prices that prevailed for groundnut pods, kernels, oils and cakes in the district during the month as compared to previous month.

	Prices in Rs. nP.	
	November 1960	October 1960
Groundnut Pods (per maund of 82-2/7 lbs.)	17.00 to 25.00	23.00 to 23.50
Groundnut kernels (per candy of 531 lbs.)	160 to 275	215 to 235
Groundnut oil (tin of 35 lbs.)	28.75 to 34.00	28.75 to 30.00
Groundnut oilcake (maund of 82-2/7 lbs.)	14.71 to 16.05	13.71 to 15.38

TIRUCHIRAPALLI DISTRICT: *Season:* Heavy to very heavy rainfall has been received in the district during the month under review. This heavy rainfall has been reported to have affected adversely the standing winter crop to a considerable extent in many parts of the district. The late sown crop which was actually withering before the rains was however said to be coming up well. In regard to early sown crop in some places, the pods have been reported to be damaged due to continuous rains for many days and consequent stagnation of water in the fields.

Arrivals and Transactions: The net result of the heavy rainfall so far as the winter groundnut crop is concerned is expected to be low yield and production and late harvesting. The yield is expected to be not even 50% of the normal and the season to start late by one month at the most.

Prices: Due to continuous rains for many days during the month the arrivals in all the markets except Karur were negligible. Mostly small scale crushers operated in the field.

The price of groundnut kernels showed a downward trend in the beginning of the month but picked up later. The minimum and maximum average prices ruled during the month were Rs. 150/- and Rs. 240/- per candy of 241 k. grams.

NORTH ARCOT DISTRICT: *Season:* There was continuous and heavy downpour of rains for nearly twenty days during the month, and as a result all tanks were full and in many areas water was overflowing. The harvest of peanuts taken up by the close of last month, was held up during the month. The groundnut crop was greatly affected by rains. The crop harvested before rains were mostly spoiled later for want of drying facilities and as a result nearly 50% of the peanut crop was damaged. On the whole 15% of the total crop in the district was damaged due to heavy rains.

Arrivals and Transactions: The arrivals, disposals, stocks etc., of groundnuts in the district during the month were as below:

	Opening Stock	Arrivals	Disposals	Closing Stock
Groundnut Pods (bags of 40 kgs.)	28412	189211	176420	41203
Groundnut kernels (bag of 80 kgs.)	748	61082	56673	5157

	Prices in Rs./nP.	
	November 1960	October 1960
Groundnut pods	16.00 to 25.00	21.00 to 26.00
Groundnut kernels	170 to 240	210 to 238
Oil (candy of 226 k. g.)	400 to 444	410 to 440

Gingelly:

SOUTH ARCOT DISTRICT: Unprecedented heavy arrivals were received at Viridhachalam market. A quantity of 4415 bags comprising 2579 bags from district produce and 1836 bags from Tiruchirapalli district arrived at this market. Arrivals to other markets were nil or negligible. A quantity of only 104 bags arrived for sale in five other markets. Despatches to Madras, Tiruchirapalli, Salem, Tanjore and Tirunelveli districts amounted to 3693 bags. A quantity of 257 bags was crushed in oil mills and chekkus. The trade had a stock of 1679 bags at the close of the month.

In spite of the increased arrivals prices tended to improve due to keen demand from outside the district. The average price per bag of 80 k. g. in several markets varied from Rs. 74.00 to Rs. 88.20 according to quality.

Tobacco :

COIMBATORE DISTRICT: The rains were moderate to heavy and widespread throughout the district. Transplanting of tobacco was completed by the end of the month under report. It is reported that due to excessive rains, the young tobacco crop was affected in some parts of the district. The standing crop is otherwise reported to be satisfactory.

At the end of the month under report there was a stock of 23652 quintals of chewing and 5765 quintals of cheroot tobacco. About 17935 quintals of chewing and 932 quintals of cheroot tobacco were exported to places in Kerala, Andhra, and Mysore States and to Ramnad, Tirunelveli, Tiruchi, Tanjavur and Kanyakumari districts in Madras State.

Prices of tobacco were fairly steady with prices of Meenampalayam tobacco ranging upto Rs. 245 per quintal. Activity in the market was limited as demand from exporting centres of Kerala State was not much.

Variety	I Grade	II Grade	III Grade
(Per quintal)			
1. Chewing tobacco - sun cured			
(a) Meenampalayam	198—245	133—198	110—155
(b) Other varieties	155—245	132—155	110—132
2. Cheroot varieties - sun cured			
(grown in Erode and			
Bhavani Taluks)	176—198	132—165	66—88
3. Chewing tobacco - pit cured			
(grown in Palladam and			
Sulur areas)	132—168	99—128	40—66

Cardamom :

MADURAI DISTRICT: *Season:* During November, 60 there was very good rainfall in the cardamom plantation areas in Madurai district as well as in Kerala hills adjoining Madurai District. Agricultural operations like Spraying, picking and curing of fruits were going on. Arrivals were good in the important assembling centres in Madurai District in Kerala hills. Despatches were mainly to Bombay, Calcutta, Amritsar, Delhi and Kanpur.

Arrivals and Transactions: The following were the opening stock, arrivals and despatches of cardmom during the month.

Name of Markets	Quantity in lbs.			
	Opening Stock	Arrivals	Sales	Closing Stock
1. Bodinaickanoor	1,000	1,18,000	1,18,000	1,000
2. Thevaram	2,000	40,000	41,000	1,000
3. Pannaipuram	...	2,000	2,000	...
4. Kombai	...	10,000	10,000	...
5. Uthamapalayam	2,000	5,500	6,000	1,500
6. Cumbum	8,000	200	200	8,000
7. Gudalur	...	1,500	1,500	...
8. Pattiveeranpatti	4,000	83,000	86,000	1,000
9. Virudhunagar	27,500	1,10,000	1,37,500	50,000

Prices :

1. Bodinaickanoor : Per lb.

Extra Green	N. R.
Green	N. R.
Medium	Rs. 7.20 to 8.69
Inferior	„ 6.28 to 8.19
Seeds	„ 9.75 to 10.30

2. Pattiveeranpatti : Per lb.

Superior and bold	Rs. 8.80 to 9.14
Medium and bulk	„ 7.92 to 8.87
Inferior and small	„ 6.78 to 8.35
(b) <i>Store Green:</i>	
Medium and bulk	Rs. 8.26 to 8.96
Inferior and small	„ 7.25 to 8.23
(c) Splits	„ 6.25 to 8.12
(d) Lights	„ 4.65 to 7.01
(e) Seeds I	„ 10.67 to 11.35
Seeds II	„

3. Virudunagar as on 23—11—1960 :

Bold Quality	Rs. 9.25 to 9.50
Small	„ 7.75 to 8.25
Seeds	„ 11.25 to 11.50
Bulk	„ 8.25 to 8.50

Review of administrative activities of Market Committees during November 1960

The Market Committees of South Arcot, North Arcot, Coimbatore, Ramanathapuram, Tiruchirapalli and Tirunelveli continued to function during the month under report.

Enforcement: The progress of enforcement during the month were as detailed below :

Name of Market Committee	Section 5 (1)		Section 5 (2)		Weighman	
	A	B	A	B	A	B
South Arcot Market Committee	316	2414	269	1690	245	1587
North Arcot Market Committee	1065	3390	1093	3269	160	941
Coimbatore Market Committee	154	2346	62	1534	17	702
Ramanathapuram Market Committee	7	361	1	293	1	245
Tirunelveli Market Committee	11	118	...	92	10	98
Tiruchirapalli Market Committee	298	2114	273	1791	244	1408

A = Licences issued during October, 1960.

B = „ „ upto the end of this month.

Meetings: No Meeting was held in any of the Market Committees during the month under review. Election to Trichy and Ramanathapuram Market Committees was underway.

Regulated Markets: All the regulated markets continued to function briskly during the month under report.

Quality Analysis: Nil.

Quality Competition: Nil.

Cardamom Market Prices in Madurai District

During October, 1960 there was good rainfall in the cardamom plantation areas in Madurai district as well as in Kerala hills adjoining Madurai district. The stand of the crop was good, Agricultural operations like weeding, spraying, picking and curing of fruits were going on.

Arrivals were good in the important assembling centres in Madurai district and in Kerala hills. But in certain assembling centres the arrivals were slightly less than previous month's arrivals. It is mainly due to fall in price.

Despatches were mainly to Bombay, Calcutta, Amritsar, Delhi Kanpur and Agra. From Bodinayakkanur and Virudhunagar exports were made to U. K. and continental countries. During the month sales at Bombay were 1770 bundles.

During the first week of October, the prices were lower by about 25 to 37 nP. per lb. compared to the previous week. During the second week the prices remained almost steady. But the prices were less by 50 nP. to Re. 1 per lb. compared to the prices prevailed during the second week of September. During third and fourth weeks of October the prices remained almost steady.

Prices as prevailed at Bodinayakkanur, Virudhunagar and Pattiveeranpatti during the month of October are given below.

Prices:

1. Bodinayakkanur:

Name of quality.	Price in Rs./nP. per lb.
Superior	8-96 to 9-56
Medium	8-30 to 9-22
Inferior	7-75 to 8-88
Seeds	10-91 to 11-36

2. Pattiveeranpatti:

(1) Sundried:	9-00 to 9-72
Superior and bold	8-40 to 9-10
Medium and Bulk	8-00 to 8-72
Inferior and small	8-50 to 8-62
(2) Store Green:	9-00 to 10-54
Superior and bold	8-96 to 9-24
Medium and Bulk	8-27 to 8-95
Inferior and small	6-52 to 7-64
(3) Lights	8-18 to 8-84
(4) Splits	11-68 to 12-36
(5) Seeds	

3. Virudhunagar:

Bold quality	9-88 to 10-25
Smalls	8-50 to 8-62
Seeds	12-25 to 12-50

Estimated arrivals and despatches during the month and closing stock at the end of the month.

Name of the assembling centre	O. balance in lbs.	Arrivals	Despatches	Closing Stock
1. Bodinayakkanur	1,500	1,11,500	1,12,000	1,000
2. Thevaram	Nil	25,000	23,000	2,000
3. Pannaipuram	Nil	Nil	Nil	Nil
4. Kombai	Nil	14,000	14,000	Nil
5. Uthamapalayam	Nil	10,000	8,000	2,000
6. Cumbam	8,000	1,000	1,000	8,000
7. Gudalur	Nil	1,000	1,000	Nil
8. Pattiveeranpatti	Nil	75,000	71,000	4,000
9. Virudhunagar	17,000	58,000	47,500	27,500

Other Markets

(Prices during the month of October, 1960)

Name of the market centre & quality of cardamom	Rate per local unit of weight in Rs./nP.	Rate per lb. in Rs./nP.
I Bombay:	Rate per kgm.	
Cardamom white	20-00 to 21-00	9-09 to 9-44
Cardamom Soneri	21-00 to 23-00	9-44 to 10-45
II Delhi:	Rate per seer.	
Small green cardamom	21-00 to 28-00	10-00 to 13-57
III Amritsar:		
Motta green	19-00 to 22-00	9-21 to 10-66
Mysore rabin	22-00 to 23-00	10-66 to 11-15
Bold quality	23-00 to 25-00	11-15 to 12-15
Extra bold	25-00 to 30-00	12-15 to 14-56
IV Mangalore:	Rate per md.	
	682	8-29
V Sirsa:	Rate per quintal	
	1900 to 1924	7-26 to 8-75
VI Sakalespur:	Rate per kgm.	
	13-35 to 25-50	6-05 to 12-50
VII Mercara:	Rate per md.	
Coorg F. A.	631-56 to 675-63	7-67 to 8-21
Coorg Nad	646-25 to 734-38	7-85 to 8-92
Coorg Male	616-88 to 660-94	7-49 to 8-03
Coorg Green	675-63 to 719-64	8-21 to 8-74
VIII Kanpur:	Rate per md. of 46 seers.	
Sakalespur	1090	11-49
Bodinayakkanur	1290	13-59
Mangalore	1310	13-58



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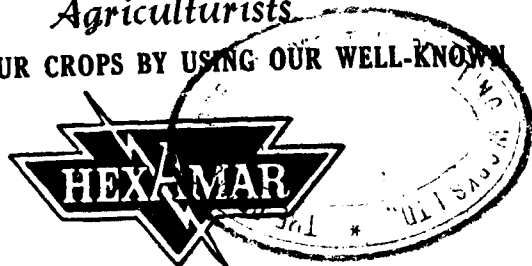
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