VOL. XVII NO. 1
APRIL 1963

PUBLISHED
MONTHLY

Editor
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Coconut bulletin

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Annual Subscription
Rupees TWO

Advertisement rates
on request

Issued by

THE INDIAN CENTRAL COCONUT COMMITTEE
(MINISTRY OF FOOD & AGRICULTURE, GOVT. OF INDIA)

ERNAKULAM, S. INDIA.

Green Manures

THAT GREEN MANURING IS THE SIMPLEST AND MOST EFFECTIVE METHOD OF maintaining the organic matter content of soils at optimum level is now widely known, but like many an other golden rule this too perhaps is followed more in the breach than the observance. It is therefore well to draw attention at this time of year to the advantages of green manuring and how it could be done, for the benefit of coconut growers.

Green manuring may be done by turning into the soil plant material grown *in situ* or brought from outside. It promotes crumb structure in heavy soils and makes light soils cohesive and retentive. It adds nitrogen to the soil, helps to conserve plant nutrients in the soil, and opens up and improves the sub-soil.

Green manure crops can be either annuals grown *in situ* or perennial bushes grown on the borders of gardens. Sunn-hemp, wild sunn-hemp, cow gram, daincha and calopogonium are green manure crops that can be grown *in situ* in coconut gardens and gliricidia is an ideal green manure bush that can be cultivated on their borders. Green manure bushes may be preferred for gardens of limited size while in the case of large gardens where no intercropping is practised a crop *in situ* may be recommended.

The Indian Central Coconut Committee has issued a pamphlet on green manure crops for coconut gardens and coconut growers are advised to peruse this pamphlet and profit by the advice given in it.

Soil Conditions and Disease Incidence in Coconut

By
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Introduction

UNFAVOURABLE soil conditions play an important role in the incidence of diseases in plants. Generally, plants growing in soils unsuitable for their normal development will lose their vigour and consequently their capacity for disease resistance with the result that they become susceptible to infection by pathogenic organisms. So far as coconut is concerned adverse soil conditions act as predisposing factors in the incidence of certain diseases such as root (wilt) disease, stem bleeding, nut fall, root rot etc. In the following discussion soil environment associated with the incidence of coconut diseases are dealt with.

Root (wilt) disease

This is the most important disease of coconuts in the Travancore-Cochin area of Kerala State affecting about a lakh of acres and causing an annual loss of about 10 million rupees. The disease has been prevalent in the State for nearly

80 years and is believed to have made its appearance after the great floods of 1882. The disease is systemic and highly infectious.

The important symptoms of the disease are a slow and general wilting of the leaves and ribbing and drying of leaflets accompanied or preceded by shedding of immature nuts and buttons. A general chlorosis of leaves and deterioration of the root system are other salient features of the disease. The yield and quality of nuts are adversely affected.

Although no particular deficiency of any macro or micronutrients was found to be the direct cause of the disease the fertility status of the soils in the diseased tract was found to be low. The present trend of investigations indicate that the primary cause is possibly a sap transmissible virus. However, there is general agreement among the research workers on the wilt diseases of coconut that availability of nutrient, physical conditions of soil and allied water relationship are factors of very great significance. Prolonged water-logging and lack of moisture in the soil are equally harmful for the coconut palm. Both these conditions will hinder the proper development of the root system thereby obstructing the necessary nutrient absorption. Proper soil management and cultural practices are of utmost importance to check the spread of the disease. In low-lying places where there is the danger of water logging, suitable drains should be opened to enable proper drainage. In sandy and sandy loam soils where there is severe drought in the summer months coconut gardens should be irrigated at regular intervals. Heavy soils without open texture for free drainage must be properly conditioned for coconut growth by giving an adequate supply of river sand to ensure proper aeration and drainage. Thus palms grown under ideal soil conditions will thrive well and have better chances to resist the incidence of disease.

Stem bleeding

This disease was first reported in India in 1922. The main symptoms of the disease are the exudation of a dark reddish brown fluid from the cracks on the bark, usually found at the lower portion of the trunk and rotting of the

Fig. 1

A palm affected by stem bleeding

internal tissue which later develops into a general decay.

A fungus, *Ceratostomella paradoxa* is often found to be associated with the infected tissue But it has been noticed that the palms are often predisposed to infection due to adverse soil conditions. Any drastic or sudden measure which would tend to change the moisture holding capacity of the soil will enhance disease incidence. Palms growing under unfavourable conditions will produce a large number of growth cracks on the surface of the stem. Suice *C. paradoxa* is a wound parasite, the presence of such growth cracks will pave way to fungal infection. Hence general improvement of cultural conditions is of utmost importance to lessen the number of growth cracks and thereby to check the spread of the disease. According to Briton Jones, a system of drainage, regular cultivation and proper manuring would give excellent result.

Sometimes bleeding may be caused by *Anabe roga*, a fungal disease, or due to adverse subsoil conditions like too high acidity or alkalinity of subsoil water. In such cases necessary correctives have to be added to the soil to reduce excess acidity/alkalinity.

Root rot

The rotting of roots in coconut may be due to various reasons. In many cases of root decay unfavourable soil conditions act as predisposing factors leading to fungal infection. Thus fungi such as *Ganodermal ucidum* (causal organism of Anabe roga), *Fomes* spp., *Rhizoctonia* sp. and *Pythium* sp. have been reported to be associated with root decay in different places. Maintenance of the normal nutrient status of the soil and adoption of proper sanitary plant protection measures such as application of lime and sulphur at the base of and digging isolation trenches around the diseased palms are to be resorted to for controlling the spread of root rot.

Nut fall

Button shedding or immature nut fall may be due to fungal infection or physiological factors resulting from adverse soil conditions such as excessive moisture, inadequate moisture or deficiency of any major nutrients in the soil. These conditions lead to distruction of root system and consequently obstruct absorption of water and nutrients. Thus water relationship leading to physiological drought is an important predisposing factor so far as nut fall is concerned. Regular manuring to make good the losses sustained by the soil due to constant exhaustion of nutrients and proper cultural practices can give good results.

Tapering disease

Tapering or pencil point disease has been found to occur in all the coconut growing areas. The characteristic symptoms of the disease are the yellowing of the tips of the leaves, a reduction in their size, a gradual decrease in the girth of the trunk and a dwindling in size of the crown. Gradual diminution in the size of crown and diameter of the stem leads to complete cessation of the production of spathes. The palm subsequently dies. Extensive root decay has been noticed in the affected palms. Tapering stem has been observed in the water logged low-lying

Fig 2

Tapering stem of a coconut palm

areas of the sandy coastal regions of Travancore–Cochin in Kerala State. The soil in the affected areas has been found to be deficient in nutrients. According to Briton Jones, application of a complete fertilizer mixture will help recovery of the palms. Soil amelioration should be carried out before the tendency to tapering takes a definite hold.

Conclusion

Whether the cause of a particular disease is parasitic or nutritional, the conditions may be directly or indirectly related to different soil factors. Condition of the host plays an important role even in the case of pathogenic infection since palms grown in unhealthy environments do not develop good disease resisting capacity. Adequate supply of nutrients and proper soil management to enable the maximum development of a healthy root system are therefore indispensable to keep the palms in healthy condition. Hence coconut growers should devote particular attention to maintain their gardens in the most ideal way so that the palms are free from diseases and give the maximum yield.

The Importance of Spacing in Coconut Cultivation

By
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Introduction

ADEQUATE spacing between palms in a coconut garden is important both from an aesthetic point of view as well as of economy. Coconut is a light demanding perennial tree unlike the jack and mango trees, which are shade loving. It is advisable to plant fewer number of palms than overcrowding the garden as the ill effect of close planting will affect the yield of palms for several years. It is a fact that in spite of larger number of palms the outturn from a closely planted garden is generally less than that from a properly spaced one. In spite of this, the tendency for close planting continues perhaps due to ignorance and also due to the fact that the valuation of land is based on the number of standing trees and not on their yield.

If one wishes to get the maximum amount of yield from one's garden, the proper step to be adopted is to provide

Fig. 1
A well spaced coconut garden

Fig. 2
Coconuts planted in single rows on bunds of paddy fields

Fig. 3
Coconuts grown on roadside as avenue

reasonable spacing (Fig. 1), adequate manuring and cultural treatment. Apart from improving the yield, proper spacing affords facilities for intercultivation by improved implements at a lower cost, as well as for raising intercrops like vegetables, groundnut, root crops like colocasia, tapioca etc. It is true that even in crowded gardens trees bear some fruit after a long lapse of years, during which time the trees will have bent in different directions in search of light. Spacing can be reduced somewhat when single lines are raised as on paddy field bunds (Fig. 2), canal bunds and as road side avenue trees (Fig. 3) or in case dwarf varieties are to be planted.

Systems of Planting

Usually four systems of planting are adopted, viz. square, triangular, oblong or rectangular and quincunx, of which the former two are popularly adopted. In the square system the palms are set at fixed equal distances at the corners of each square, the distance between palms in each row and the distance between adjacent rows remaining the same (Fig. 4). According to the triangular system the palms are planted at fixed distances at the corners of an equilateral triangle (Fig. 5).

Fig. 5
Triangular system of planting

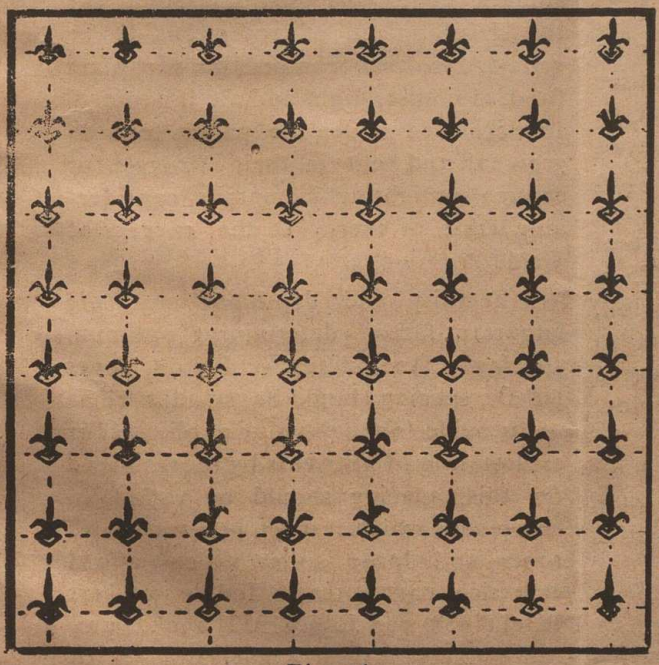

Fig. 4
Square system of planting

By adopting the triangular system higher number of trees can be planted in a given space allowing uniform distance from plant to plant. An idea of the number of trees per acre by these two common systems of planting in vogue can be had from the following table.

NUMBER OF PALMS PER ACRE IN RELATION TO PLANTING DISTANCES AND SYSTEM OF PLANTING

Number of Palms per acre.

Planting distance	Square System of planting	Triangular system of planting
6.7 m	90	104
7.0 m	82	94
7.3 m	76	87
7.6 m	70	80
8.0 m	64	74
8.3 m	60	69
8.6 m	56	64
8.9 m	52	60
9.2 m	48	56

(Courtesy : The Coconut Palm—A Monograph)

Spacing adopted in different countries

Considerable variation in spacing actually adopted in different countries and in the same country from region to region exists. In India, the spacing varies from 6 m to 9 m or more though 7½ m to 9 m is now recommended for average conditions. Pieris (1945) reported that coconuts are planted as close as 2.75 m or as far apart as 14 m in Ceylon, although the common spacing is 8 m to 8.7 m. However, 8 m is considered suitable in most conditions in Ceylon. The spacing adopted in some of the other countries are: Malaya, 9 m; Indonesia, 10 m to 11 m; Seychelles, 9m to 10 m; Trinidad, 7.7m; and British Guiana, 9 m.

Factors influence spacing

While deciding the optimum spacing several factors have to be taken into account. Depending upon the soil and climatic conditions adequate room for the development of roots has to be provided so that competition for plant food, moisture, light and air is avoided. In a crowded garden the palms tend to grow tall and bent in their struggle for enough sunlight which entails considerable waste of energy at the expense of yield.

Fertility and depth of soil are important factors determining optimum spacing. According to Briton Jones (1940), spacing should be so adjusted as to provide enough volume of soil for exploitation of nutrients by roots. Based on this, spacing should be varied in heavy soils which restrict penetration of roots and loose soils which afford extensive root spread. Indian workers Patel (1938) and John (1952) and Jamaican workers suggest higher number of palms per acre for fertile soils while in

Ceylon and Philippines fewer number of palms are recommended.

Close planting of coconuts is advocated in Ceylon for areas subject to drought (Ganarajah, 1954). The increased number of palms is expected to prevent excessive evaporation from the soil by the canopy of overlapping fronds of the adjacent palms. Briton Jones (1940) has pointed out that the increased number of palms by itself will form a source of drain on the available soil moisture.

Incidence of diseases like leaf rot, bud rot and button shedding are also high in over-crowded gardens as the closeness of the crown favour easy spreading of the disease causing organism. Moreover an over-crowded coconut garden with overlapping fronds is a standing invitation to rats.

Methods of rectifying irregularly planted gardens

To solve the problem of overcrowding in an existing garden, uneconomical trees may be cut and removed for the benefit of the better ones. This reduction in the number of tress will not only improve the condition of the remaining ones but will also be economical from the point of view of manurial requirement.

Crowded gardens are very common in Kerala, Madras and other states. When properly thinned down, their yield will go up considerably. If planters are reluctant to cut and remove palms, transplanting the excess trees to vacant sites with proper spacing may be done. But care should be taken to see that the trees transplanted are healthy and vigorous ones; otherwise the trouble and money spent on the work would be as good as wasted. That with proper care, transplanted palms will reach pre-transplantation standard within 6 to 7 years was recorded at Central Coconut Research Station, Kasaragod where a bearing coconut palm transplanted in 1953 started yielding nuts by 1957 and attained full bearing standard by 1960 (Menon and Pandalai 1960-61). No amount of manuring or cultivation without thinning down will improve the situation. When overcrowded, trees do not get sufficient sunlight and resultantly they become poor bearers. This may be the reason for the comparatively higher yield of marginal trees in a coconut plantation.

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KERALA

June

Open up basins round the trees in loamy, sandy and laterite and also in alluvial soils if green manuring can be done.

In loamy, sandy and laterite soils, plant gliricidia as a hedge plant.

July

Complete the digging up of basins in loamy and laterite soils. Bury a green manure crop or green leaves in the basins and cover.

MYSORE

June-July

Apply a manure mixture. If a green manure has been sown or if heavy rains are expected, apply this in basins round each palm. Keep in mind that the garden should be free of weeds before you apply your manures. The following manure mixture may be applied to the palms.

1. Superphosphate or bonemeal	1 kg.	per tree per year
2. Ammonium sulphate	1½ kg.	
3. Sulphate or muriate of potash	1 kg.	

or

1. Groundnut cake	9 kg.	per tree per year
2. Ash	11 kg.	
3. Bonemeal	1 kg.	

MADRAS

June-July

With the receipt of soaking showers, give a basal dressing of ash at 9 kg. per tree or cattle manure or compost at 21 to 42 kg. per tree.

Sow a green manure crop of sunnhemp, *crotalaria striata*, *calopogonium mucunoides* or *kolinji*.

In sandy soils or in places where such green manure crops cannot be grown, plant quick-growing, green leaf-yielding plants like *gliricidia maculata* along the borders of the garden.

ORISSA

June

Dig basins round the palms. Apply green leaves and cattle manure at the beginning of the south-west monsoon. First apply the green leaf at 22–45 kg. per tree; then spread cattle manure at 45 kg. per tree. Cover with soil. Towards the end of the monsoon, apply manures such as bonemeal aud cover the basins completely.

July

Catch and kill the rhinoceros beetle. Apply manure to your vegetable crops. Transplant gliricidia cuttings from the nurseries round the garden.

MAHARASHTRA

June

Bury husk, if available. Repeat this operation every five or six years.

Plant gliricidia along the borders with a spacing of four to five feet. You can grow 300 plants on the border of an acre plot and get about 2720 kg. of green leaves every year in two cuttings.

July

If possible grow tapioca between coconut rows. For this purpose, make raised beds. When planted cuttings put on four or five leaves, apply ash, and earth them up twice at a fortnight's interval.

WEST BENGAL

June-July

Dibble cowpea or sunn-hemp behind a *desi* plough in June, using a seed-rate of 21 to 27 kg. If it is calopogonium, broadcast the seed at 3½ to 4½ kg. per acre.

When dry coconut husk is available cheap, dig six feet wide and 15 inch deep trenches between your coconut rows, and fill them with the husk at 1000 per tree and cover. The best time to do this is June-July. The trees benefit from this manure for five or six years.

ANDHRA PRADESH

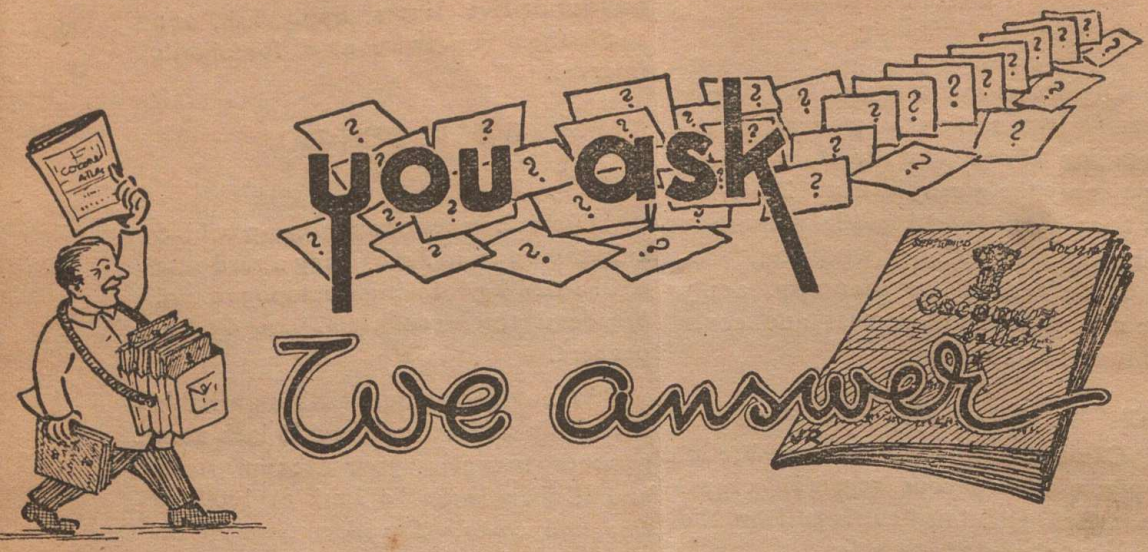
June-July

Bury busk wherever possible.

Apply per tree the following manures.

Ammonium sulphate	1 to 1⅓ kg.
Muriate of potash	1 to 1⅓ kg.
Superphosphate or bonemeal	1 kg.

Apply the mixture in basins after the heavy rains are over.



Question: I have a coconut garden on a hill slope in South Malabar. To terrace it is too difficult and uneconomic. What is the alternative? I request you to let me know, what manures are to be applied to the trees and how? I also request you to suggest some cover crop to prevent surface wash and erosion.

Answer: You are advised to take to crescent terracing, that is, providing semicircular ring bunds about 10 to 15 ft. in diameter. The steep sides of the bund must be properly protected with stones. Put in this basin about 200 lb. of green leaf which is easily available in hill tracts. Apply over it 3 lb. each of ammonium sulphate and muriate of potash and 2 lb. of superphosphate. Cover the whole with a 3" layer of soil.

Purarea javanica is a good cover crop. It prevents soil erosion and kills weeds. For steep slopes where terracing is very difficult it is a good cover crop.

Question: Is it good to grow tapioca as a subsidiary crop in coconut gardens?

Answer: Tapioca can be grown as an inter-crop once in three or four years. As both coconut and tapioca require a large supply of potash, adequate quantities of ash must be applied to the garden when cultivating tapioca. Otherwise the available potash would be taken in by the tapioca and the coconut palms would be weakened The continuous cultivation of tapioca in coconut gardens will not only result in exhaustion of the soil but an increase in rat trouble. The following rotation of

subsidiary crops is recommended for adoption in coconut gardens :–

1st year	Tapioca.
2nd year	Modan paddy and gram.
3rd year	Vegetables.
4th year	Tapioca.

Coconut gardens should be heavily manured whenever subsidiary crops are cultivated in them.

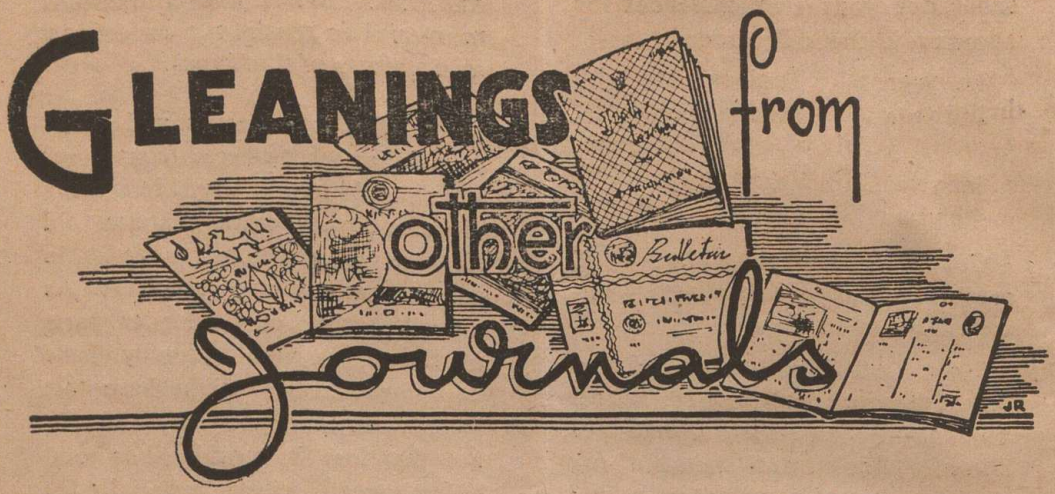
Question : Lots of rotten leaves and other organic matter are found deposited on the banks of rivers. Are these suitable for preparation of compost manure? Can they be applied in the place of green manure for coconut or paddy? Can the stuff be got dried and powdered and applied with ash and other manure? What are the useful manurial ingredients contained in deposits of this kind?

Answer : The rotten leaves and other organic matter gathered from river sides should first be stored in manure pits along with cattle manure, till they are required for application in coconut gardens or paddy fields. As a good portion of the tender parts of the leaves would already have decomposed, they might have lost some manurial ingredients, and cannot, therefore, be considered as good as fresh green leaves, especially for paddy cultivation. The leaves are generally applied for the nitrogen and the organic matter in them. The latter improves the structure of the soil.

WEATHER REVIEW

FEBRUARY 1963

	TEMPERATURE				RAINFALL			Sunshine
	Maximum		Minimum		Quantity in m.m.	Departure from normal	No. of rainy days	Total hrs. of bright sunshine
	Highest	Average	Lowest	Average				
Central Coconut Research Station, Kayangulam	35.5°C	33.3°C	17.2°C	21.3°C	10.5	—25.6	2	285.7
Central Coconut Research Station, Kasaragod	34.7°C	33.1°C	17.0°C	20.8°C	0.0	0.0	0	274.2



Panchayats To Distribute Quality Seeds

Panchayats and Co-operatives all over the country engaged in the distribution of improved and quality seeds are to receive special financial assistance. This will be in the shape of a premium of Rs. 2/- per maund, to be shared equally between the Centre and the States. This facility will be available for the remaining period of the Third Plan and the amount needed for this subsidy will have to be found from within the State plan and the ceiling of Central assistance.

Government have requested the State Governments to ensure that co-operatives are increasingly associated with the distribution of improved seeds. They have been requested to give this scheme top priority in the context of the present emergency when all efforts are being made to secure an immediate increase in food production.

As against the target of 148 million acres of additional coverage by improved seeds of foodgrains under the Third Plan, the area likely to be covered at the end of the second year is about 32 million acres. This leaves a balance of 116 million acres to be completed during the remaining three years of the Plan in addition to the periodical renewal of acres already covered. This slow progress has been attributed to inadequate arrangements for the distribution of seeds. In some cases, this shortfall is also due to the reluctance on the part of the distributing agencies to undertake the work properly because of the additional expenses they have to incur by way of premium and expenses on collection, transport, storage etc. It is hoped that the co-operatives and panchayats will avail of the facility now offered to undertake distribution of improved seeds more extensively.

— The Journal of Industry & Trade.

Rise in Pepper Exports

Exports of pepper which amounted to Rs. 24.6 million in 1958-59 increased to 82 million in 1959-60. In 1960-61, they increased further to Rs. 85.1 million. During 1961-62, they were valued at

Rs. 81 million. Average of annual export for the period from 1959-60 to 1961-62 was Rs. 82.6 million. Target of the export for the first two years of the Third Plan was 80 million. Steps have been taken to increase export further. Compulsory pre-shipment and quality control scheme under "Agmark" has been instituted. Publicity in foreigen market is being stepped up.

—The Journal of Industry & Trade.

Export Promotion Schemes for Coir

The Coir Board has announced that all registered exporters of coir yarn, coir mats and mattings will be eligible to utilise a specified percentage of their export earning for the import of dyes and chemicals, sisal yarn and fibre and essential items of machinery like ledger blades and shearing blades required by the matting sector of the coir industry. For this purpose, licences will be issued to registered exporters on a quarterly basis.

—The Journal of Industry & Trade.

Paddy—Black Gram Rotation to Increase Paddy Yields

Black gram, it is found, is yet another paying crop that can be grown in rotation with paddy. The crop also helps increase the paddy yields.

Experiments conducted for three years by Agricultural Scientists in Orissa have shown that black gram—paddy rotation can give 40 per cent more yields of paddy. The gram crop yielded 350 lb. per acre. This meant that the farmers' income doubled if he grew black gram as a rotation crop.

Green gram also can be grown as a rotation crop. But the paddy yields in the paddy—green gram rotation showed only 30 per cent increase.

—Farm News.

WEATHER REVIEW

MARCH 1963

	TEMPERATURE				RAINFALL			Sunshine
	Maximum		Minimum		Quantity in m. m.	Departure from normal	No. of rainy days	Total hrs. of bright sunshine
	Highest	Average	Lowest	Average				
Central Coconut Research Station, Kayangulam	34.2°C	33.1°C	21.3°C	23.8°C	77.6	45.9	8	293.2
Central Coconut Research Station, Kasaragod	34.5°C	33.1°C	22.0°C	23.6°C	52.1	+51 2	1	282.1

Market Surveys

Foreign Markets

General Trend

The March, 1963 issue of the "Oil World" Hamburg has reported a steady to firm trend in prices during the fortnight ended 12th March, in the world markets for oilseeds, oils and fats. The heaviest price advances were registered for olive oil, linseed oil and marine oils but towards the second week of March the prices for soyabeans and oil, cotton seed and oil, rape seed, sunflower oil, copra and coconut oil, linseed, castor oil and castor beans also increased. Only the prices of groundnuts and oil, lard, tallow and particularly of oil cakes and meals displayed a weak trend. The relatively weak trend of groundnuts and groundnut oil was a result of the surprisingly good crop in Nigeria, the equally surprisingly large exports from India, the disappointment at the Spanish sunflower oil purchases, and also of the improved crop prospects in Argentina The weakness of the oilcake markets is not only a seasonal development but also a reaction to the excessively high prices during the past twelve months.

A steady to firm basic trend is likely to continue until September, 1963. The unusually low olive oil production in Southern Europe, the increase in the consumption of margarine and compound fats in the whole of Europe and the normalisation of North West European stock-keeping in the course of 1962 have been the main reasons for the sharp increase in the net import requirements of the countries in Europe. It will absorb about four-fifth of the increase in next export supplies. The remaining one-fifth will be taken up by the larger demand from East and South Asia, Turkey and North Africa.

SINGAPORE

March 1963

Copra

During the month of March, 1963 the Singapore copra market remained weak as there was only very little buying interest for F.O.B. copra from Asian countries.

On the 1st March, price per picul (133⅓ lb.) F.O.B. copra fair mixed was quoted at M$ 29 00 and the price remained at the same level on the 8th, the 15th and the 22nd. But towards month end, the price slightly advanced and was quoted at M$ 29.25 on the 29th March, 1963.

Coconut Oil

During the month of March, 1963 the Singapore coconut oil market displayed a fairly good demand for both bulk and drum oil. The market throughout presented a mixed trend in prices but towards month end due to several active enquiries for drum oil, the prices slightly advanced.

The price quoted for a picul of coconut oil in second hand drums on the 1st

March, 1963 was M$ 44.75. It improved to M$ 45.75 on the 8th and continued in the same level up to the 15th March. On the 22nd it slightly dipped to M$ 45.50 but closed for the month end on the 30th March, 1963 at M$ 45.75 per picul.

CEYLON

March 1963

COPRA

During the month of March, 1963, the undertone of the Colombo copra market remained strong and the prices improved from the previous month's level.

On the 4th March, 1963, copra Estate No. 1 was quoted at Rs. 176.50 per candy (560 lb.) which advanced to Rs. 181.00 on the 11th and Rs. 183.25 on the 18th. But on the 23rd the price slightly declined to Rs 177.00 but the market closed on the 30th March, 1963 at Rs. 179.50 per candy.

A similar trend in prices was seen in the case of milling copra also. On the 4th March, a candy of milling copra was quoted at Rs. 174.00 which improved to Rs. 178.50 and Rs. 180.75 on the 11th and the 18th. On the 23rd, the price slightly came down to Rs. 174.50 but closed for the month end at Rs. 177.00 per candy.

COCONUT OIL

The coconut oil market in Colombo during March, 1963 improved compared to the previous month.

On the 4th March, 1963, a ton of coconut oil was quoted at Rs. 990.00 but the price went up to Rs. 1020.00 on the 11th and Rs. 1025.00 on the 18th. On the 23rd a ton of oil was valued at Rs. 990.00 and closed for the month end on the 30th at Rs. 1010.00 per ton.

Indian Markets

COCHIN

March 16th to April 15th 1963

When the Cochin coconut oil market opened on the 16th March, 1963, a quintal of ready oil was quoted at Rs. 256.50. During the week ended 23rd March, the coconut oil market displayed an easy undertone on account of the non-availability of steamer and waggon facilities for despatch of oil to Calcutta side and also due to the large inflow of copra in the market. On the 18th, a quintal of oil was quoted at Rs. 260.50 and remained more or less at the same level till the 22nd and closed for the week end on the 23rd at Rs 259.00.

The market continued to be weak during the last week of March due to incessant flow of copra into the market and the ready oil prices were lower than the futures. On the 25th the price quoted for a quintal of oil was Rs. 255.50 which came down to Rs. 245.50 on the 28th but closed for the month end on the 30th at Rs. 253.00 per quintal.

When the market opened on the 1st April, 1963, a quintal of ready oil was valued at Rs. 249.00 only. The market continued to be weak for want of encouraging enquiries from up-country markets and on the 2nd and 3rd the price for a quintal of oil remained at

(*Continued on page 25*)

MARKET REPORTS

I. Cochin, Alleppey & Calicut

The daily prices of coconuts, copra, coconut oil and coconut oil cake at Cochin, Alleppey and Calicut from 16th March 1963 to 15th April 1963 are given below:

Date	Coconuts per thousand without husk			Copra per quintal*			Coconut oil per quintal			Coconut oil cake per quintal		
	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut
	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.	Rs. nP.
16 - 3 - 63	240 00	230 00	225 00	171 30	175 00	170 00	256 50	255 00	262 00	41 00	41 00	38 00
17 - 3 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
18 - 3 - 63	240 00	N.R.	N.R.	173 80	178 00	N.R.	260 50	262 00	N.R.	41 00	41 00	N.R.
19 - 3 - 63	250 00	N.R.	255 00	173 50	180 00	175 00	260 00	262 00	267 75	41 00	42 00	38 00
20 - 3 - 63	235 00	235 00	N.R.	173 50	178 00	N.R.	260 50	260 00	N.R.	40 00	42 00	N.R.
21 - 3 - 63	240 00	N.R.	240 00	173 50	180 00	173 00	260 50	262 00	265 00	40 00	43 00	38 00
22 - 3 - 63	235 00	N.R.	240 00	173 50	180 00	173 00	260 50	264 00	265 00	40 00	44 00	38 00
23 - 3 - 63	235 00	235 00	240 00	172 80	182 00	173 00	259 00	263 00	266 00	41 00	44 00	38 00
24 - 3 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
25 - 3 - 63	235 00	N.R.	237 50	170 67	180 00	173 00	255 50	259 00	266 00	41 00	42 00	38 00
26 - 3 - 63	235 00	N.R.	230 00	170 75	178 00	173 00	255 00	258 00	260 00	41 50	42 00	38 00
27 - 3 - 63	235 00	230 00	230 00	170 00	176 00	173 00	252 00	254 00	260 00	42 50	41 00	38 00

28 - 3 - 63	235	00	N.R.	237	50	164	75	175	00	173	00	245	50	254	00	259	00	42	00	41	50	38	00
29 - 3 - 63	235	00	N.R.	237	50	169	50	173	00	173	00	253	00	254	00	260	00	42	00	41	50	38	00
30 - 3 - 63	235	00	235	00	222	50	169	50	175	00	172	50	253	00	254	00	260	00	42	00	41	50	38	00
31 - 3 - 63	S		U		N		D		A		Y		S		U		N		D		A		Y	
1 - 4 - 63	235	00	N.R.	237	50	167	00	175	00	168	00	249	00	250	00	260	00	42	00	41	00	38	00
2 - 4 - 63	235	00	N R.	237	50	167	50	175	00	169	00	250	00	249	00	260	00	42	00	41	50	38	00
3 - 4 - 63	235	00	235	00	237	50	167	50	168	00	169	00	250	00	240	00	260	00	42	00	41	00	38	00
4 - 4 - 63	235	00	N.R.		237	50	168	00	168	00	168	00	250	50	242	00	260	00	42	00	41	00	38	00
5 - 4 - 63	235	00	N.R.		237	50	169	50	173	00	168	00	253	00	244	00	258	60	42	00	41	00	38	00
6 - 4 - 63	N.R.		235	00	237	50	N.R.		175	00	168	00	N.R.		248	00	259	00	N.R.		41	00	38	00
7 - 4 - 63	S		U		N		D		A		Y		S		U		N		D		A		Y	
8 - 4 - 63	235	00	N.R.		237	50	171	50	175	00	167	00	256	25	250	00	258	00	42	00	41	50	38	00
9 - 4 - 63	235	00	N.R.		237	50	173	00	175	00	168	00	258	50	250	00	254	00	42	00	41	50	39	00
10 - 4 - 63	235	00	235	00	237	50	175	75	175	00	168	00	262	50	254	00	254	00	43	00	42	00	39	00
11 - 4 - 63	N.R.		N.R.		230	00	N.R.		N.R.		173	00	N.R.		N.R.		261	00	N.R.		N.R.		38	00
12 - 4 - 63	N.R.		N.R.		230	00	N.R.		N.R.		176	00	N.R.		N.R.		261	00	N.R.		N.R.		38	00
13 - 4 - 63	235	00	235	00	N R.		180	89	N.R.		N.R.		271	00	N.R.		N.R.		42	50	N.R.		N.R.	
14 - 4 - 63	S		U		N		D		A		Y		S		U		N		D		A		Y	
15 - 4 - 63	N.R.		235	00	230	00	184	25	180	00	176	00	274	00	262	00	265	00	44	00	43	50	42	00

Source: (1) **Cochin:** Indian Chamber of Commerce, Cochin. (2) **Alleppey:** The Malavala Manorama. (3) **Calicut:** The Mathrubhumi.
N. R. = No report. * Prices quoted for office pass copra at Cochin and Calicut and for Thelivu copra at Alleppey. 1 Quintal = 220.462 lb.

II. Malabar

Arrivals and sales of coconuts and copra in the different markets in Malabar during the month of March 1963

Commodity - Markets	Carry over	Arrivals	Sales	Balance
Coconuts (in thousands)				
Kozhikode	450	3,550	3,650	350
Badagara	626	1,350	1,090	886
Ponnani	22	170	[illegible]	64
Tellicherry and Dharmadam	120	600	640	80
Tirur	74	601	591	84
Cannanore	9	87	89	7
Copra (in quintals)				
Kozhikode	860	9,400	7,800	2,460
Badagara	8,690	12,500	13,500	7,690
Cannanore	64	640	680	24

Weekly prices of coconuts and copra in some of the Malabar markets during the month of March 1963

Commodity - Markets	1st week Rs. nP.	2nd week Rs. nP.	3rd week Rs. nP.	4th week Rs. nP.
Coconuts (husked for 1000)				
Badagara	245.00	243.00	253.00	255.00
Ponnani	250.00	225.00	240.00	250.00
Tellicherry and Dharmadam	220.00	224.00	219.00	205.00
Tirur	240.00	245.00	225.00	220.00
Cannanore	283.00	273.00	270.00	270.00
Copra at Badagara Market (per quintal)				
Office pass	174.00	170.00	168.00	168.00
Edible Copra				
Madras	193.00	188.00	193.00	193.00
Dilpas	188.00	181.00	183.00	181.00
Rajpur	225.00	220.00	216.00	216.00

General **1. Coconut:** Arrivals and despatches increased during the month. Prices also marked an increase during the period.

2. Copra: Arrivals continued to increase. Prices of all varieties declined owing to fall in despatches to outside centres.

III. Colombo

The weekly prices of coconuts and coconut products at Colombo during the month of March 1963 are given below :-

Commodity	Unit	Week ending 4-3-63 Rs. cts.	Week ending 11-3-63 Rs. cts.	Week ending 18-3-63 Rs. cts.	Week ending 23-3-63 Rs. cts.	Week ending 29-3-63 Rs. cts.
Fresh Coconuts - (Husked) used for copra making and local consumption	per 1000 nuts	85.00 to 110.00	85.00 to 110.00	85.00 to 110.00	85.00 to 110.00	85.00 to 110.00
Copra - Estate No. 1 quality at Buyers' Stores	per candy of 560 lb.	176.50	181.00	183.25	177.00	179.50
Desiccated Coconut - Wharf delivery or Buyers Stores' Medium and fine 50%	per lb.	0.44	0.46	0.47	0.45	0.45
Coconut oil - White, naked wharf delivery	per ton	990.00	1020.00	1025.00	990.00	1010.00

Advisory and Information Service

Advice regarding various aspects of coconut cultivation and the coconut industry will be gladly furnished on request, free of charge, by appropriate officers of the Indian Central Coconut Committee.

Enquiries regarding breeding, cultivation, manuring etc. of coconut may be addressed to the **Joint Director, Central Coconut Research Station, Kasaragod,** those about pests and diseases and their control to the **Director, Central Coconut Research Station, Kayangulam, Oachira P. O.,** and requests for information on the coconut industry in general to the **Secretary, Indian Central Coconut Committee, Ernakulam - 1.**

IV. Malaya

SINGAPORE

Weekly prices of copra and coconut oil at Singapore market during the month of March 1963 are given below:-

Date	Copra $	Coconut Oil $
1-3-1963	29.00	44.75
8-3-1963	29.00	45.75
15-3-1963	29.00	45.75
22-3-1963	29.00	45.50
29-3-1963	29.25	45.75

PENANG

Average monthly prices of copra and coconut oil at Penang market during the month of February 1963 are given below:-

Month	Copra $	Coconut Oil $
February 1963	29.50	45.25

NOTE : The prices quoted above are per picul F. O. B. Singapore and Penang inclusive of the cost of containers i. e: second hand drums in the case of coconut oil and second hand gunny bags in the case of copra.

One picul = 133⅓ lb. One M$ = Rs. 1.56.

Rs. 250.00. It closed for the week-end on 6th at Rs. 254.00.

The market opened on the 8th at Rs. 256.25. In the second week of April buoyant conditions prevailed in the market on account of good demand for ready oil from upcountry markets and further the market remained firm and prices advanced as one of the leading soap manufacturing concerns started buying both ready oil and futures. On the 10th a quintal of oil was quoted at Rs. 262.50. The 11th and the 12th were holidays on account of Maundy Thursday and Good Friday and the market opened on the 13th at Rs. 271.00 and the closing quotation for a quintal of oil on the 15th was Rs. 274.00.

ALLEPPEY

March 16th to April 15th 1963

When the Alleppey coconut oil market opened on the 16th March, 1963, a quintal of ready oil was quoted at Rs. 255.00. The market remained almost steady till the week ended 23rd March on account of the demand for oil from North Indian markets. On the 18th a quintal of oil was quoted at Rs. 262.00 and remained steady with slight fluctuations till the 21st and the market closed on 23rd at Rs. 263.00 per quintal.

The marked opened on the 25th at Rs. 259.00. During the week the prices tended to sag due to selling pressure from millers and lack of fresh demand for oil from North Indian markets. On the 26th the price for a quintal of oil was Rs. 258.00 which declined to Rs. 254.00 and remained at the level till the market closed on the 30th March, 1963.

When the market opened on the 1st April, 1963, a quintal of oil was quoted at Rs. 250.00. The bearish trend of the previous week continued to persist in the first week of April, also, owing to selling pressure from millers due to the continued absence of orders from North Indian markets. The price declined to Rs. 240.00 on the 3rd but advanced to Rs. 242.00 on the 4th and to Rs. 244.00 on the 5th. The closing quotation on the 6th was Rs. 248.00.

The market opened on the 8th at Rs. 250.00 and during the week prices showed an upward trend as there was good demand for ready oil from North Indian markets against the restricted stock of oil held by the millers. On the 10th a quintal of oil was quoted at Rs. 254.00 and the market remained closed on the subsequent two days due to Maundy Thursday and Good Friday. The market closed on 15th April, at Rs. 262.00 per quintal.

New Members of the Indian Central Coconut Committee.

The Indian Merchants' Chamber, Bombay have re-nominated Shri P. T. John, Deputy General Manager, Tata Oil Mills Co. Ltd., Bombay, as a member of the Indian Central Coconut Committee for the period ending 31st March, 1966.

The Government of India have re-nominated Shri C. M. John, Cherukara Farm, Changanacherry,, Kerala State as a member of the Committee for the period ending 31-3-1966.

The Government of Mysore have nominated Shri V. Venkatappa, M. L. C., Landlord, Thittamaranahalli, Malur, Hobli, Chennapatna Taluk, Bangalore District as a member of the Indian Central Coconut Committee for the period ending 31-3-1966.

Shri Venkatappa had served on the Committee for a period of six years from 1-4-1951.

Chief Development and Liaison Officer for Coconut, Arecanut, Cashewnut and Spices

Shri T. S. Krishnamurti, Deputy Secretary in the Ministry of Food and Agriculture (Department of Agriculture), on his retirement from that post, has been appointed as Chief Development and Liaison Officer for Coconut, Arecanut, Cashewnut and Spices under the Indian Central Spices and Cashewnut Committee. He will look after the Coconut, Arecanut, Spices and Cashewnut crops. Shri Krishnamurti will have his headquarters at Ernakulam.

Shri S. G. Aiyyadurai, formerly Oilseeds Specialist, Coimbatore has been appointed as Deputy Chief Development Officer for Coconut, Arecanut, Cashewnut and Spices crops under the Indian Central Spices and Cashewnut Committee.

Control of Nephantis serinopa

A meeting of the Sub-Committee of the Indian Central Coconut Committee to consider the question of controlling the *Nephantis serinopa* pest by insecticidal methods will be held at Trivandrum on the 24th and 25th April, 1963. The meeting will be attended by Shri K. P. Madhavan Nair, Vice-President of the Committee, Dr. Sardar Singh, Plant Protection Adviser to the Government of India, Dr. S. Pradhan, Head of the Division of Entomology,

I. A. R. I., the Government Entomologist, Andhra Pradesh, Dr. P. J. Gregory, Secretary, Indian Central Coconut Committee, the Entomologist, Central Coconut Research Station, Kayangulam, the Director of Agriculture, Kerala and the Professor of Entomology, Agricultural College, Vellayani, Trivandrum.

Training in breeding parasites of N. Serinopa

The Indian Central Coconut Committee at its meeting held in March, 1962 had decided that the technique of breeding the parasites that can destroy the pest *Nephantis serincpa* should be taught to all those who desired to learn it. Arrangements were therefore made at the Central Coconut Research Station, Kayangulam for imparting the training. Two growers were given the requisite training at the above Station in December 1962 and a second group of 16 coconut growers were given training from the 19th March, 1963.

Forest Resources Survey

Assistance to the tune of Rs. 40 lakhs is expected to be provided by the Special United Nations Fund for Economic Development for the Union Government's Rs. 1. 40 crore scheme for surveying India's forest resources on a scientific basis, says a report in 'Research and Industry'. The aid will be mainly in the form of technical know-how and equipment, including helicopters and aerial survey apparatus. The survey project, which is included in the Third plan for meeting the requirements of such forest-based industries as rayon, chip board and fibre board, has assumed importance in the present emergency. The project will include the improvement of logging methods in accordance with modern developments. The survey will prepare a forest inventory, conduct an appraisal of Industrial Development possiblitties and suggest a plant for industrial plantations, more especially of the quick growing species. To begin with, the survey is intended to cover about 12,000 square miles covering the following three regions: (i) the Himalayan region, more especially Uttar Pradesh, Himachal Pradesh and Punjab; (ii) the Central Zone consisting of Madhya Pradesh, Orissa, Andhra Pradesh and Maharashtra and (iii) the Western Ghats consisting of Kerala and Mysore.

Distribution of coconut seedlings

Reports received from the Departments of Agriculture of the different States go to show that quality coconut seedlings from coconut nurseries jointly financed by the Committee and the concerned State Governments were distributed as follows:-

Andhra Pradesh

In February 1963, 5749 quality coconut seedlings were distributed among the growers.

Madras

In February, 1963, 18156 quality coconut seedlings were supplied to coconut growers.

Orissa

In the month of December 1962, January and March, 1963, 126, 276 and 180 coconut seedling respectively were supplied to the growers.

Publications of the Indian Central Coconut Committee

BOOKS

		Price per copy including cost, postage, registration etc. Rs. nP.
1.	The Coconut Palm — A Monograph — de luxe edition Sh. 90/ $ 13.00	43 00
2.	The Coconut Palm — A Monograph — cheaper edition	21 00
3.	The First Conference of Coconut Research Workers in India	12 00
		(Excluding Postage)
4.	Coconut Cultivation — A Hand Book English edition Rs. 2.75, Malayalam edition Rs. 1.75 and Tamil, Telugu, Kannada, Oriya, Assamese and Marathi editions Rs. 1.32 each.	
5.	Reports on the Marketing of Coconut and Coconut Products (Malayalam)	1 38

PERIODICALS

		Annual subscription Rs. nP.	Price per copy Rs. nP.
1.	The Indian Coconut Journal — Quarterly English Inland	4 00	1 00
	,, Foreign	4 57	1 15
2.	Coconut Bulletin — Monthly ,, Inland	2 00	0 20
	,, Foreign	3 32	0 30
3.	Nalikera Bulletin — Monthly—Malayalam Inland	1 00	0 10
	,, Foreign	2 32	0 20
4.	Thengina Bulletin — Monthly—Kannada Inland	1 00	0 10
	,, Foreign	2 32	0 20

Note: The cost per back issue of the "Bulletin" will be double the price of single copy.

FREE PAMPHLETS

		English	Malayalam
1.	Plant coconuts on paddy field bunds	,,	,,
2.	Treatment of compost for control of rhinoceros beetle	,,	,,
3.	Green manure crops for coconut plantations	,,	,,
4.	Gliricidia — A green manure bush for coconut gardens	,,	,,
5.	How & why of spraying coconut palms	,,	,,
6.	Grade specifications for coconut oil and standard contract terms for milling copra	,,	,,
7.	Village copra kiln — Kannada	,,	,,
8.	New planting & under planting of coconuts	,,	,,
9.	Indian Central Coconut Committee — What it is and what it does	,,	,,
10.	Nursery officers' manual	,,	—
11.	Coconut pests & their control	,,	—
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