BULLETIN

Issued by the

INDIAN CENTRAL COCONUT COMMITTEE

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THE

Indian Central Coconut Committee

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In this Issue

NOTICE

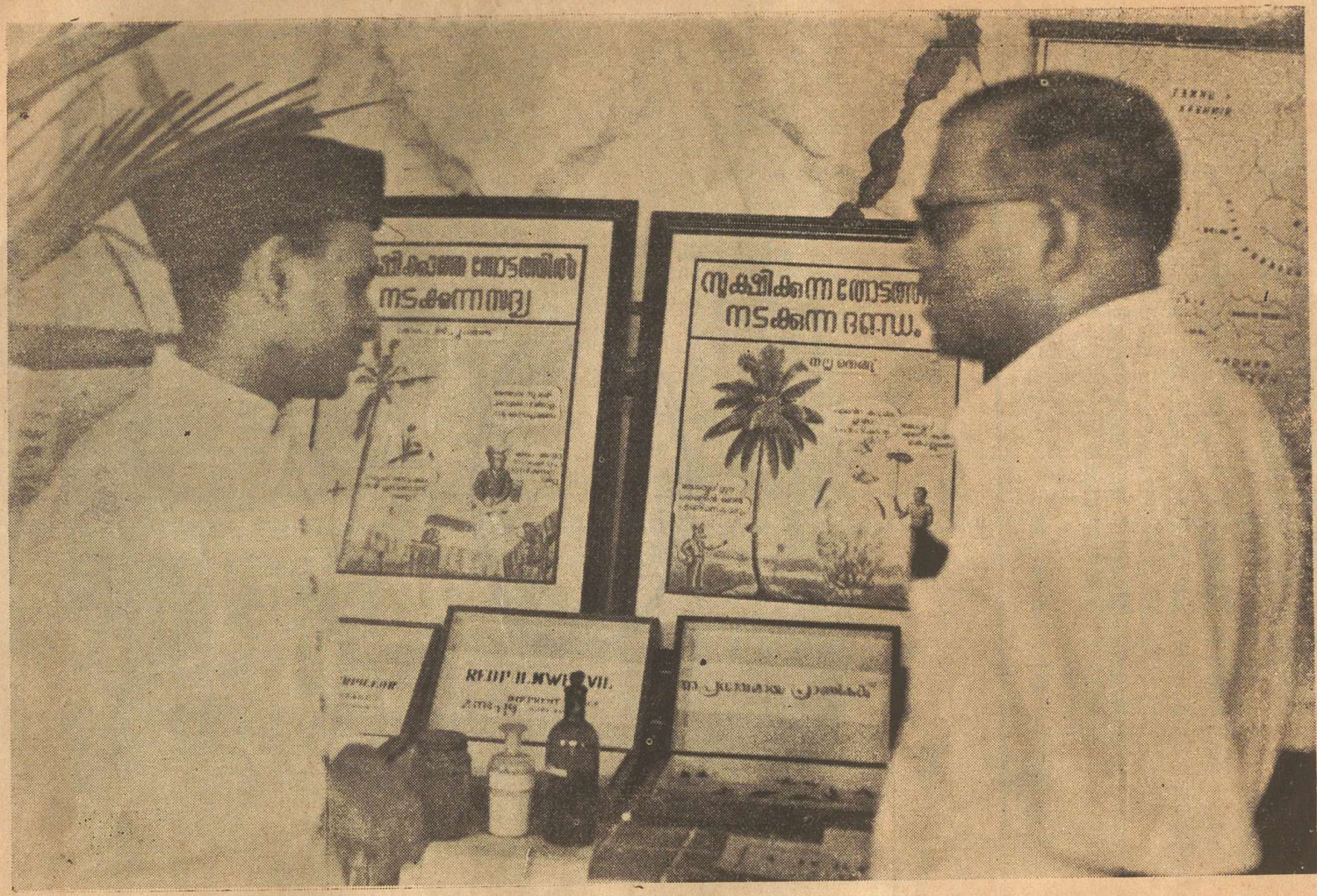
In view of the high cost of production of the "Bulletin Issued by the Indian Central Coconut Committee" the Committee had at its meeting held on the 30th April, 1952, decided to enhance the annual subscription per copy of the "Bulletin" (both English and Malayalam) from Six annas to Twelve annas (inclusive of postage). The new rate of subscription has been brought into effect from the issue for August, 1952 (Vol. VI. No. 1) and amounts with us standing to the credit of subscribers on 1st August, 1952 adjusted according to the new rate.

Secretary,
Indian Central Coconut Committee,
ERNAKULAM.

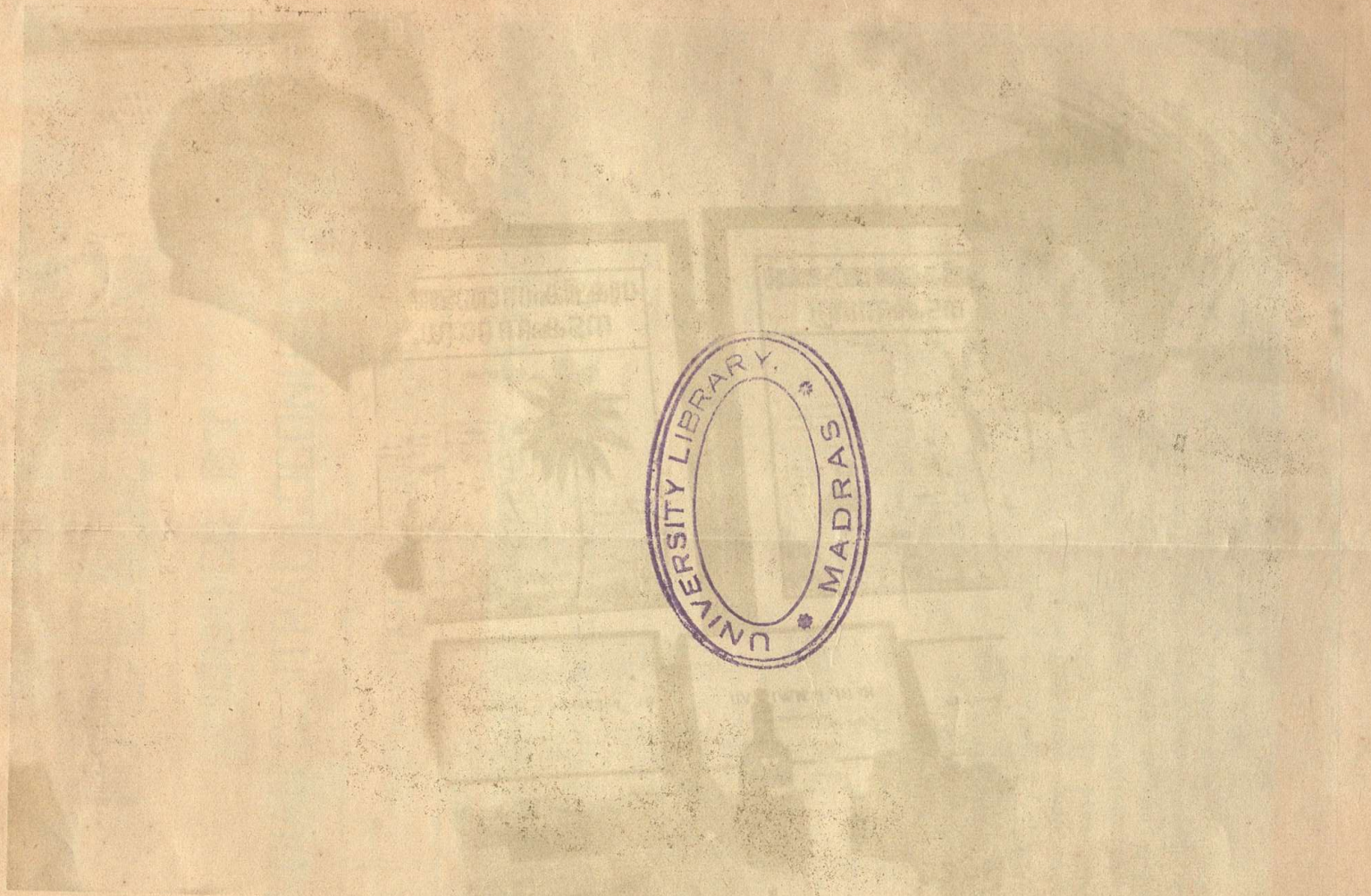
NOTICE

Non-receipt of copies of any particular issue of the "Bulletin" should be intimated to the Secretary, Indian Central Coconut Committee, Ernakulam, before the 15th of the month next to that of the issue. Complaints received later will not be entertained. Subscribers may, however, please note that ordinarily the responsibility of this office would cease when the copy is posted and that it cannot hold itself responsible for loss which might occur in transit. When addressing the Committee subscribers should quote their subscriber numbers to ensure quick disposal of their complaints.

Secretary,
Indian Central Coconut Committee,
Ernakulam.



Sri K. Gopalan, Secretary, Indian Central Coconut Committee explains to H. H. the Raj Pramukh, Travancore- Cochin the exhibits at the Committee's stall at the Industrial, Agricultural and Educational Exhibition, held recently at Ernakulam.



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THE INDIAN CENTRAL COCONUT COMMITTEE

VOL. VI. | ERNAKULAM, JANUARY, 1953. | NO. 6.

Agricultural Heroes Honoured

Prime Minister's Plea for Intensive Cultivation

ADDRESSING the third Convocation of the Indian Council of Agricultural Research held at New Delhi on 6th January 1953, the Prime Minister pleaded for popularising intensive cultivation for solving the country's food problem. He also emphasised the need for a proper relationship between the peasant and the research worker, as otherwise "all research would become an utter waste."

Congratulating the "Krishi Pandits" who had won prizes and shields in the All-India crop competition, the Prime Minister said that they must popularise their methods of effecting increased yield among their neighbours in the village. He also suggested that, more prizes should be instituted to be given on a collective basis to whole villages where the yield was highest.

Mr. Nehru said that he was not against waste lands being cleared for cultivation but more attention should be paid to intensive cultivation.

"I am more interested in intensive cultivation as by effecting a little improvement in the yield of land already under the plough, we can get enough and more foodgrains for our needs," he said.

Mr. Nehru advised the students who had just received their diplomas not to imitate the "official mentality" of merely giving orders from the office chair and making their official weight felt all round in a spirit of bossiness. This was an old habit in India which had no place now in the changed circumstances of to-day.

"You have to go out to the peasants," he said, "who work in the fields and understand their problems. You have to talk to them in their own language, live with them and learn from them. The peasants have centuries-old experience in agriculture and it may be that in certain respects they know more than you do. You, as experts, should learn something from the peasants before you begin teaching them. Otherwise, what you say will not, cut much ice with the peasants."

Task of Research Worker

Referring to the work done by the Indian Council of Agricultural Research, Mr. Nehru said that it was essential that whatever was done by this institution should reach the ears of the peasant in the fields. Only when a proper relationship was established between the research workers and the peasants could fruitful results be achieved. For this reason, more and more attention should be paid to simplifying the method of informing the peasant about new things and using the language he understood for doing so. "It is a very dangerous and harmful thing that on one side our intelligent young men should do research work, while on the other, their formulations should not reach the peasants in the fields. In the absence of a proper relationship between the peasant and the research worker, all research would become an utter waste."

The development of this relationship, Mr. Nehru said, was essential in all fields of work, but it was especially so in agriculture, where crores of people had to be reached. He would even go to the length of saying that the research workers and others while conversing with the peasants should do so in their particular dialect and not the polished language of the cities. "I want all young men who have received diplomas to befriend the peasants and the workers and to work with them in a spirit of co-operative endeavour. There should be no tendency on their part to mere ordering the peasants or workers about."

Value of Manual Labour

Mr. Nehru said that it was very harmful for the old aversion to manual labour to continue poisoning the minds of the young. "I have often raised my voice against this tendency of considering manual labour as low and egarding because such a mentality is utterly useless. Day by day, manual labour is being more and more honoured all over. That man gets the laurels most now who works with his hands, because no country to-day could prosper where manual labour was looked down upon or despised. So, our young men who get specialised education in any professions should learn to use their hands and take pride in doing so."

The Prime Minister related an incident of his tour to the United States undertaken three years ago. He did so to stress his point about the dignity of

manual labour. He visited during the trip an agricultural college in America, he said, when an American professor told him about one Indian student who refused to milk a cow. The student had gone to learn modern dairy farming methods at that college, but would not do anything with his hands. According to the American professor, the Indian student said that milking cows and such other work should be done by others. The professor expressed complete surprise over this attitude of the student who neither knew how to milk a cow nor did he want to learn it. "This is a case," said Mr. Nehru, "which shows how our minds have been adversely influenced about manual labour. It is a strange thing indeed, this hesitancy to do work with one's own hands. You should completely wipe out this tendency. Otherwise, you cannot do your work effectively and the progress of the country will come to a standstill."

Food Problem

Turning to the food problem, Mr. Nehru said that it was a very important one. Even the development of industries could be undertaken on proper lines only when the food problem was solved, and the country produced enough for its needs and did not have to import foodgrains. Any terrible thing might happen in the world making it impossible for the country to import foodgrains. The country would then be faced with scarcity. It was to get over this difficulty, Mr. Nehru said, that the Planning Commission had laid special stress on this question.

"Many people may remember," said Mr. Nehru, "that three years ago I laid down a target date in 1952 for attaining food self-sufficiency. I had said then that by this date we should be in a position to produce enough for our needs and stop import of foodgrains. I had made this declaration in a forthright manner and resolved not to import after this date whatever happens. It pained me a lot when we were not able to fulfil this resolve and attain food self-sufficiency by the target date. I was also pained when the pledge we had given to the nation had to be broken. We were helpless because the circumstances were such that we could not fulfil it. We had to import food as we could not let famine take toll of human lives and starvation to raise its head in our country.

"For this reason, I rather hesitate to fix another target date for achieving self-sufficiency in food. I do want that in the remaining three years of our first Five-Year Plan, we should fulfil this pledge of self-sufficiency in food."

Continuing, Mr. Nehru said that while the Planning Commission had expressed the great desirability of achieving food self-sufficiency within the course of the Plan's five years, they had left the door open as regards imports in unavoidable circumstances. But

the endeavour should be to achieve self-sufficiency as otherwise a lot of money would be drained out of the country for buying foodgrains abroad which could be more usefully employed in developing other sectors of the country's economy. "This thing," said Mr. Nehru, "should not be difficult of achievement. Our attention has often gone to the question of bringing more land under cultivation. But, in my opinion, it is very important to see how much we produce from land. Our endeavour should be to increase the yield of land already under cultivation. I consider intensive cultivation more important than extensive cultivation."

Mr. Nehru referred to the high yields attained by the "Krishi Pandits" and said that it might not be possible to have that high yield all over the place, but when these Pandits had produced 70 maunds of wheat in an acre as aginst the average of eight or nine maunds, it should surely be possible for the average yield to be increased to 15 or 16 maunds. With a little care in selection of seeds and judicious use of manure, this could be made possible. "If we increase the average yield of, say, wheat from eight maunds to 15 maunds, then this whole question of food will be solved. Not only that, we would then have enough and to spare which we could utilise for satisfying our other needs."

Institution of Prizes for Villages

The Prime Minister asked the "Krishi Pandits", who had won prizes and shields, to popularise their methods of effecting increased yield among their neighbours in the village. In fact, this whole conception of offering prizes, to individual competitors should undergo a change. While he was not against individuals getting prizes for effecting high yields, more prizes should be instituted to be given on a collective basis to whole villages where yield was highest. This would induce the peasants to co-operate with each other in producing more. This would also curb the tendency among villagers to be selfish. The prizes for villages need not be in the form of silver or gold shields, but it could be a building which the villagers needed.

Mr. Nehru referred to mechanised farming and said that he was not against use of tractors or other agricultural machinery. But in India, every peasant could not be provided with these machines all at once. Where tractors could be used effectively, they should be used. But stress should be laid on increasing prodution through simple methods and simple implements which the peasant could easily handle. In Russia, agricultural machinery was introduced on a large scale after the revolution, but in many cases, the tractors broke down and remained idle for want of proper repairs and technical personnel, who could handle them. Now, of course, mechanised agriculture in Russia was going full speed ahead and working efficiently. So, India should take a lesson from Russia and not in-

troduce too many of these mechanical things in the agricultural field just now.

In conclusion, Mr. Nehru asked agricultural experts to put their knowledge to proper use by working hand in hand with the peasants.

Agriculture, Key to Prosperity

Dr. Punjabrao Deshmukh said that agriculture was the key to Indian prosperity.

Dr. Deshmukh, said that agricultural and urban industry were not enemies on opposite sides of the fence. "One is essential to the other and neither can prosper if either falls on bad times," he added.

Dr. Deshmukh said that during the last 23 years of its existence, the Indian Council of Agricultural Research had helped to extend and strengthen the spirit of co-operation between the Centre and the States in the task of agricultural development.

Reviewing the activities of the Council, Dr. Deshmukh said: "One of our main difficulties so far has been to establish the right sort of link between the cultivator and the scientist so that the knowledge gained in the laboratory quickly finds its way to the farm in the digestible form. That is being sought to be achieved by our schemes of agriculture extension and agricultural information."

Dr. Deshmukh said that five training schools, forty model extension projects and a few institutional extension centres were already functioning. "Through our agricultural extension centres and our proposed agricultural information machinery, we hope to be able to direct a nation-wide effort upon a particular agricultural problem if it needs be and at the same time we want a concentrated advance in getting knowledge to the cultivators," he said.

Crop Competitions

Referring to crop competitions Dr. Deshmukh said that Government proposed to institute in addition to the existing all-India prizes awarded to individuals, all-India community prizes. These would be awarded to the best village, tehsil, district and State, judged according to certain standards and the prizes would be utilised for the benefit of the particular region as a whole.

"The results achieved so far give us encouragement for the future and I am convinced that increasing the area under crop competitions is a sure way of increasing production," he said.

Dr. Deshmukh referred to Vana Mahotsava and said that four all-India shields would be awarded for the highest record in tree planting during the Vana Mahotsava festival.

The Manuring of Underplanted Young Palms *

(By M. L. M. Salgado, Soil Chemist, Coconut Research Institute of Ceylon)

In the rehabilitation of the coconut industry about which so much is being talked today, replanting of senile plantations should be given priority.

The object of today's Field Day is to focus your attention on manurial problems of replanting and demonstrate the importance of systematic manuring of underpalms.

When new plantations were opened up from virgin jungle you had a soil with reserves of fertility which the young palms could draw upon. Under such conditions, especially on deep alluvial soils, little manuring was required in the early stages to bring up young plantations to bearing in reasonable time.

Where underplanting is done we are handicapped by a soil whose fertility has been tapped for perhaps 60 years or more and it is futile to expect young plantations to flourish without systematic manuring. This is particularly true of neglected overgrazed plantations and eroded lands.

Seeing is believing and those of you who may have been sceptical about the necessity for manuring have seen the disappointing condition of the unmanured plots, sickly and yellowish, of poor girth and scanty crowns, with hardly any nuts although some of them have flowered. In contrast you have seen the palms systematically manured with a complete mixture—palms with well-formed crowns, healthy green foliage and heavily bearing bunches. You have seen Blocks No. 1 and 2 of the estate area producing crops of 3,000 nuts per acre per annum in the 13th year after planting.

Systematic manuring of young palms should begin with the adequate manurial preparation of the planting hole. The planting hole should never be less than 3' x 3' x 3'—on hard lateritic and gravelly soils, the extra money spent on a hole 4' x 4' x 4' is a sound investment. Filling the planting hole with two layers of husks and *good top soil and ash* as described in our C. R. S. Leaflet No. 4 gives a good start to the seedling. On poor exhausted soils two basketfuls of well-rotted cattle manure or 10 lbs. of goat manure may be mixed with advantage.

On clay soils it is a good practice to mix the top soil with coarse river or sea sand to improve the texture of the planting hole. Water-logging of planting holes causes set-back to the growth of seedlings.

* Paper read at a Field Day at Letchemy Estate, Nattandiya on the 31st August, 1951.

With this treatment of seedling holes, further manuring is not regarded as necessary during the first year after transplanting. Moreover, during this period, the plant is supplied with reserve food materials stored in the seednuts from the husks, nitrogen and phosphoric acid stored in the kernel, besides which the oil of the kernel is converted into starch for the young plant before it commences to manufacture sufficient for itself. Although on newly cleared virgin jungle with reserves of plant food, manuring may not be necessary in the second year, manuring of underplanted seedlings should definitely commence before the end of the second year.

In the case of young palms, even more than for bearing palms, potash is of predominant importance. Nitrogen in excess in comparison with potash should be avoided as this makes the young palms susceptible to fungus pests such as *Pestalozzia palmarmu* (Grey Blight) and *Helminthosporium incurvatum*, and allied leaf diseases. This was observed in our manurial experiment on young palms at Ratmalagara Estate this year.

Rates of Application

The following basic mixture is suitable, applied at increased rates with increasing age:-

Sulphate of ammonia or calcium cyanamide	2 parts
Saphos phosphate	2 ,,
Muriate of potash	3 ,,
	7 parts

2nd year	1½ lbs. per palm
3rd year	2 ,,
4th and 5th year	2½ ,,
6th and 7th year until flowering.....	3 ,,

On small-holdings and small estates where the use of artificial manures is not possible, the occasional use of kitchen ash combined with cattle or goat manure is to be strongly recommended Half a kerosene tinful of ash increasing up to one tin after the fifth year, together with one basketful of well-rotted dung increasing up to four after the fifth year applied annually will be beneficial. Goat manure, if available, may be used instead of cattle manure, less being required, amounts of one-quarter of a basketful in the first year to one basketful in the fifth year being satisfactory. Goat manure applied to growing palms should preferably be crushed if in the form of hard pellets. The ash should be well mixed up with the dung in order to prevent the breeding of coconut black beetle. Husk ash may be used instead of kitchen ash at the rate of 2 to 4 lbs. per palm.

If cattle or goat manure is not available, manuring with ash alone will be beneficial.

Method of application

In the early stages, until the stem is formed, manures should be applied close to the palm, up to a distance of

1 foot during the second year, and the soil turned with mamotties or mamotty forks. As the palms grow older the area round which manures are applied should be gradually extended.

After the stem is formed manures should be applied in a circular trench. To begin with the trench may be cut 2 feet wide at a distance of 2 feet from the palm. As the palm comes into bearing this may be extended to the usual manure circle 3 feet wide cut at a distance of 3 feet from the palm.

During the first 3 years, the annual application may with advantage be divided into 2 doses applied once in six months.

Mulching

Young palms are particularly susceptible to drought conditions and there is no better method of protecting young palms against drought than mulching with coconut husks round the palms up to a distance of 4 to 6 feet. A well-packed husk mulch effectively prevents weed growth round the palm. If coir dust is used for mulching seedlings an area round the base up to six inches should be left unmulched. It has been noticed that when coir dust is in contact with the young leaf bases the latter tend to rot. Decaying leaf bases attract the red weevil in particular.

Removing the Old Stand

As soon as the young palms flower the old stand of palms should be removed. However well manured the young palms may be they will remain unproductive if shaded by the old palms as light is essential for the synthesis of food in the leaves.

With today's prices there are many proprietors who hesitate to cut down old palms which carry even a few nuts. Enlightened planters should, however, take a long view and adopt a decisive policy of removing the old stand at least within three years from the time of flowering of the new plantation. Where the position of a seedling is in close proximity to an old palm it would be sound policy to remove the latter at the time of planting. Palms in active competition with the young palms should be given priority when removing the old stand.

Old palms with their more active root-systems rob the young palms of manure. In such cases the cutting of isolation trenches round the palms would be a good practice.

—Ceylon Coconut Quarterly

Increased Use of Ammonium Sulphate Urged

A New Delhi message dated the 10th January 1953 says that it is learnt that the Central Government has suggested to the State Governments that vigorous steps must be taken to increase the consumption of sulphate of ammonia with a view to increasing the food production in the country.

The first point urged for consideration is price. While pool price ranged between Rs. 355 and Rs. 380 during 1952, it has been reduced to Rs. 335 from January 1st 1953. It has been urged that incidental charges of distribution including railway freight and commission to the middlemen vary between Rs. 60 and Rs. 100 per ton and that this amount must be brought down to the minimum. The need for strengthening marketing arrangements has also been enphasized. It is felt that ammonium sulphate could be given on credit to farmers and the money could be recovered at the time of harvest. Special importance is, however, attached to organising demonstrations in rural areas on the use of fertilizers and persuading the agriculturists to manure their fields with suitable mixtures.

Stock Position

Further enquiries reveal that stocks on hand of ammonium sulphate in the country on December 31, 1952, are 200,000 tons of which 150,000 tons are with the Central and State Governments, Madras alone having 75,000 tons while another 50,000 tons are kept in Sindri itself. A decision has recently been taken to continue the Central Fertilizer Pool during 1953 also. During the current year Sindri is expected to produce about 300,000 tons of ammonium sulphate and about 100,000 are expected to be received under the Indo-American technical assistance programme. A part of this latter quantity is supplied by Japan at a price of Rs. 240 per ton. Incidentally, the explanation for Japan supplying at this low price when even within her own borders the price is over Rs. 300, seems to be that Japan, with the dollars she gets from the T. C. A. for supplying ammonium sulphate to India, purchases Cuban sugar, which is sold in Japan at a price which yields sufficient margin to meet any loss on the supply of ammonium sulphate. Another 22,000 tons of sulphate of ammonia may be available from indigenous by-products. Altogether about 622,000 tons will be available during 1953. Although this quantity is more than what has been consumed in the past years, very much more could be utilised in a country of vast dimensions like India. The off-take during 1952 was 330,000 tons as against a firm demand from the States and other interests of 370,000 tons. It is stated that this fall in demand is due to the inability of the U. P. Government and the tea gardens to take up their full quota.

March Operations in Coconut Gardens

In Areas bordering the back waters

AS the areas bordering the back-waters of Kerala are low-lying lands, coconut is cultivated here on raised bunds. In between the bunds there are channels which, during the summer months, are dug up and the earth and silt thus obtained added to the sides of the bunds to strengthen them. The tops of the bunds are left concave to act as a basin round the palms, so that the water from occasional rains may not flow off but sink into the bunds themselves. As fresh roots strike into the fresh earth added to the sides of bunds and take in nutrients and moisture, the trees are not affected by drought during the summer. As cleaning up the channels and earthing up the bunds are operations as important as manuring they should be conducted once a year. These operations are usually done in March.

By March end or the beginning of April the ponds situated in coconut gardens are cleaned up and the silt in the pond beds removed and spread under the coconut palms. Adding silt to sandy porous soils is a good practice as it helps such soils to retain moisture and improves their texture. It is in March that silt is added to sandy soils and sand to clayey soils.

In the plains

As the water-table in the plains is not very low, it is not difficult to irrigate the coconut gardens in such areas or to grow in them vegetables which require watering. It is during March that the maximum watering is required. If this is done a high percentage of fruit-setting in vegetables and button setting in coconut palms can be expected.

In Elevated regions

Here the water table is low and irrigating the coconut gardens is out of the question. Therefore, in addition to ploughing the gardens once at the commencement of the summer, it would be desirable to plough them once in March also. Alternatively the soil can be stirred by using the triangular harrow. This prevents evaporation of the sub-soil moisture. Moreover, the soil gets weathered by exposure to sun and wind, water from occasional rains is easily absorbed and the soil is not washed off.

What they do in Mysore

In Mysore, sheep are penned in coconut gardens during February-March. About 1000 sheep are penned continuously for a period of 5 days in an acre and the sheep manure ploughed into the soil. In some places in Mysore penning of sheep and ploughing in of forest soil are done in

Exchange of Rice for Fertilizers

ACCORDING to a New Delhi report dated the 9th January, 1953, the Union Agriculture Minister, Dr. Punjabrao Deshmukh has proposed a maund for maund rice-for-fertilizer barter deal between the Union Government and cultivators all over India, to be effected through the State Governments.

The idea, Dr. Deshmukh said, addressing the Food Ministers' conference held on the 9th January, was to give fertilizers, whether produced in Sindri factory or imported, to cultivators without either the cultivator or the State Government having to pay the Union Government anything except one maund of rice per acre at the harvest time.

In view of the carry-over of the fertilizers which were purchased at a higher rate during the previous year the State Governments were likely to suffer some losses in the disposal of the stock.

Dr. Deshmukh suggested, however, that, if his proposal was accepted, the question of losses would not arise.

If the whole quantity of chemical fertilizers was pooled together, the price per maund delivered to the cultivator would come to Rs 15 per maund. If these fertilizers were mixed with some other cheaper material the total acreage that could be covered with fertilizers was likely to be increased proportionately and th ere could be a slight reduction in prices also.

If the scheme was accepted, Dr. Deshmukh said, the quantity of food grains to be imported during the current year could be reduced and the national fertilizer industry would get support.

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coconut gardens in alternate years. Soil from nearby forests is dug up, spread in the gardens at the rate of two cartloads for each coconut palm and then ploughed in.

Pests and Diseases

Coconuts and the vegetables grown in coconut gardens are liable to be attacked by various pests and diseases. Clean cultivation is, however, a general preventive measure. Weeds and rubbish should not be allowed to accumulate here and there in the gardens. They should be collected in one heap and converted into compost. If this is not feasible they may be burnt. Smoke does good to plants and if the burning is done at night many insects which do harm to plants will be attracted to the fire and destroyed. Burning rubbish regularly near vegetable patches will considerably minimise attack by pests. Occasionally a mixture of charred earth and ash can be applied to the vegetables as good manure.

You Ask, We Answer

Improving Derelict Coconut Garden: Growing Pepper with Coconut

QUESTION:- The Coconut trees in my garden are being attacked by various pests and diseases. In some cases the leaves have rotted and in others the leaves are yellowing. The rhinoceros beetle is also causing a great deal of damage to the palms. In short I am getting annually hardly 1000 nuts from 200 trees. The soil in my garden is sandy and it is a level piece of land without any pits or depressions. What should I do to improve my garden ?

Answer: If you want to save your coconut garden, you must manure and cultivate it regularly. Spray the trees regularly with fungicides and extract and destroy the beetles from the crowns. Unless you persevere in these there is no hope for it.

At the commencement of the South-west monsoon, apply broadcast to the garden 200 baskets of farmyard manure and 50 tins of ash, plough them into the soil and sow the seeds of a green manure crop like *Crotalaria striata*, sunnhemp or *Kolinji* at the rate of about 25 lb. per acre. Cover the seeds by working the triangular harrow. When the green manure plants begin to flower slash them and plough them into the soil. This should be done by about September. Along with the green manure plants plough into the soil muriate of potash and superphosphate at the rate of 1 cwt. each per acre.

Spraying should be done in the months of January, April and September. Cut and remove with a sickle tied to the end of a long pole, the rotted ends of the leaflets and burn them. Then spray Bordeaux mixture or perenox on the leaves and the central shoot.

Bordeaux Mixture is prepared as follows:-

The ingredients required are copper sulphate, quicklime and water. These are to be taken in the proportion of 5 lb. of copper sulphate and 5 lb. of quicklime in 50 gallons of the mixture.

Dissolve 5 lb. of copper sulphate by suspending it tied loosely in a piece of gunny in 25 gallons of water contained in a wooden, earthenware or copper vessel. Slake the quicklime by sprinkling some water over it and then make it into a creamy paste free from lumps by adding more water to it. The whole of the remaining water is then

added, stirring all the while, and the resulting 'milk of lime' is strained into another vessel. Now pour the copper sulphate solution into the milk of lime, stirring well all the time.

Bordeaux Mixture deteriorates on storage; hence only just the quantity of the mixture required for immediate use should be prepared. If, owing to unforeseen circumstances, the mixture prepared has to be left over for the next day, add to the mixture sugar or jaggery at the rate of ½ lb. per 50 gallons of the mixture.

A quarter pound of Perenox should be mixed in 10 gallons of water for purposes of spraying.

Fill the holes from which the beetles have been extracted, with a mixture of sand and 10 per cent B. H. C. (using Gammexane or Hexidole or Agrocide in the proper concentration). If at the time of each harvest the tree climber is sent up with a beetle rod and a bag of the above mixture and the beetles systematically extracted and the holes filled with the mixture, damage by beetles would be greatly reduced. It is also essential to destroy the grubs of the beetle, breeding in manure heaps or pits by spraying or sprinkling on them B. H. C.

QUESTION:- I have planted coconut palms in my garden 25 ft. apart. Would it be harmful if I planted standards of *murukku* (*Erythrina indica*) between the palms and trained pepper vines on to them?

Answer: It is doubtful whether the *murukku* standards planted between the coconut palms will get sufficient light and stirke root. But if the soil in the garden is sufficiently fertile and the standards do get established, there is no harm in training pepper vines on to them. But sufficient manuring should be done both for the coconut trees and pepper. Every tree must receive annually 100 lb. of green leaves, 75 lb. of cattle manure and 1 to 13 tins of ash. At the beginning of the south-west monsoon dig broad basins round the palms, spread in them the green leaves and over them the cattle manure and cover the whole with a 2-inch layer of earth. In September sprinkle ash in the basin and cover it up completely.

In August-September pepper also must be manured. Prepare basins round the vines without injuring the roots and apply manures as follows:-

Rotted dung or compost	— 1 basket.
Ash	— 2 measures
Bone meal or Superphosphate	— 1 lb.

The pepper should not be allowed to grow higher than 15 ft. If permitted to grow too high its yields will be reduced and the coconut palms deprived of light.

The garden should be cultivated regularly and at the appropriate seasons, weeds removed and buried and the soil kept stirred.

News and Notes

Sri K. Gopalan, Secretary, Indian Central Coconut Committee, left Ernakulam for New Delhi on the 15th January, 1953, to attend the meeting of the Fats and Oils Sub-Committee of the Indian Standards Institution, which took up for discussion the specifications for coconut oil. He returned to headquarters on the 25th January 1953.

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The Kannada speaking areas of North and South Kanara Districts and Mysore State have together an area of 224,000 acres under coconut, second only to the Malayalam speaking areas. It has, therefore, been decided to publish a Kannada edition of the monthly "Bulletin", at present issued by the Committee in English and Malayalam, for the benefit of coconut growers in the Kannada speaking areas. The first issue of the Kannada "Bulletin" will be brought out by the end of January 1953. It will contain useful articles on coconut cultivation and market information. A nominal subscription of 12 annas per annum (inclusive of postage) has been fixed for the publication and intending subscribers are requested to remit the amount by *Money Order* to the Secretary, Indian Central Coconut Committee, Ernakulam, giving their names and full address clearly on the money order coupon.

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A 3-year scheme for the development of the coconut industry in the Andamans sanctioned by the Indian Central Coconut Committee began to be implemented on the Islands with the arrival there on the 17th January 1953 of a special staff consisting of a Coconut Development Officer and two Field Assistants deputed for the purpose from the mainland. The special staff left for the Andamans from Calcutta on the 13th January 1953 by S. S. Akbar.

Regular planting of coconuts in the Andamans was started about 50 years ago in the virgins oil of forest clearings, but with indiscriminate planting and inadequate attention bestowed on the trees subsequently, coconut cultivation in the Islands has sunk to a low level of efficiency. Seeing, however, that there are posibilities of improving and expanding coconut cultivation in the Islands, the Indian Central Coconut Committee sanctioned recently a 3-year scheme for the purpose. At present the absence of terracing on hill-slopes has led to serious soil erosion and exposu e of the boles of the palms. The rhinoceros beetle and other pests are causing great damage to the palms and lack of proper and regular manuring and intercultivation has brought down their yeild. It is, however, felt that if, by a proper survey, suitable sites for coconut growing are located and quality seedlings are platned in them a considerable new area could be brought under the crop and that by regular cultivation and manuring and destruction of pests, the existing gardens could be made to give economic yields.

Under the scheme referred to above these items of work are proposed to be undertaken. A nursery will be started for the supply of quality seedlings and propaganda and demonstration will be conducted to impress on the islanders the importance of modern methods of coconut cultivation.

* * * * *

The Indian Central Coconut Committee participated in the All-India, Educational, Agricultural and Industrial Exhibition held at Ernakulam from 20-12-1952 to 4-1-1953. The Committee's stall was one of the most interesting and educative ones at the exhibition and attracted a great deal of attention.

As one entered the stall, one saw preserved specimens of the eggs, larvae, pupae and beetles of the rhinoceros beetle which is responsible for so much damage to the crown of the coconut palm. One saw also demonstrated how the pest could be controlled in its breeding places, namely, manure heaps, pits, etc., by spraying them with Benzene Hexachloride of 0. 025 percent concentration. This treatment destroys the eggs and grubs in the breeding places and fewer beetles get about to do their destructive work.

The different stages of the coconut caterpillar were seen exhibited next and the methods of controlling the pest biologically and through insecticides were demonstrated. The former consists in releasing on the affected palm certain parasites which lay eggs on the pupae of the coconut caterpillar and whose larvae eat up the contents of the pupae of the pest. The pest can be destroyed by spraying the leaves of the affected palms with 0·2 per cent wettable D. D. T.

How the crown of the coconut palm could be sprayed for controlling the coconut caterpillar and the leaf disease, was actually demonstrated in front of the stall where a real coconut palm had been planted and a sprayer operated to spray its crown.

The control of the red palm weevil which is another dangerous and destructive pest of the coconut palm was also demonstrated at the Committee's stall. This is effected by soaking the tissue of the affected portion of the crown with an emulsion called Pyrocone. The emulsion is conveyed through a tube struck into the hole through which the pest has found entry into the palm.

Other exhibits in the Committee's stall included quality coconut seedlings from the Central Coconut Research Station, Kasaragod, exotic varieties of coconuts, different fungicides and insecticides used in the control of the diseases and pests of the coconut palm, different grades of copra and coconut oil, and specimens of coir, coir yarn and ropes, coir mats and mattings.

There were also on display the Committee's publications, some interesting posters and photographs depicting various aspects of coconut cultivation.

* * * * *

The Committee participated in the III Industrial Exhibition held at Kottayam from the 1st to the 14th January 1953, under the auspices of the local Y. M. C. A. The exhibits were more or less the same as those at Ernakulam.

* * * * *

The Director of Agriculture, Madras, has reported that during November and December 1952, coconut seedlings of the order of 7662 were distributed among 103 coconut growers from the various coconut nurseries in the State, financed jointly by the Indian Central Coconut Committee and the State Government. No seedling was distributed from the nurseries at Pattambi, Coimbatore and Maruteru during the two months. The total number of seedlings supplied from the nine nurseries in the State during the nine months, April 1952 to December 1952, was 1,43,750.

* * * * *

It is with great regret that we have to report that extensive damage was caused to coconut gardens by the recent cyclone that struck the East Coast. It has been reported that a survey of the affected areas in the Tanjore and Trichinapolly Districts has shown that about 50 percent of the coconut trees in the path of the cyclone have been damaged, and it is estimated that about 32 lakhs of seedlings may be required to underplant the affected areas.

MARKET REPORTS

I. COCHIN, ALLEPPEY & CALICUT.

The daily prices of coconuts, copra, coconut oil and coconut oil cake at Alleppey, Cochin, and Calicut from the 11th December 1952 to 10th January 1953 are given below:—

Date	Coconuts per 1000			Copra per ton			Coconut oil per ton			Coconut oil cake per ton		
	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut	Cochin	Alleppey	Calicut
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
11-12-52	132-8	*	106-8	1116-12	1137-2	1108	1653-14	1624.8	1680	358-1	324-14	328
12-12-52	132-8	*	106	1108-4	1145-1	1120	1662-6	1658-11	1686-6	358-1	324-14	328
13-12.52	132-8	132-8	102-8	1138-1	1171-6	1144	1679-7	1680-1	1696	362-5	324-14	336
14-12-52					SUNDAY							
15-12-52	132-8	*	98-12	1154-5	1188.7	1144	1700-12	1692-14	1728	366-9	342	340
16-12-52	132-8	*	107-8	1146-10	1188-7	1160	1687-15	1692-14	1744	366-9	342	344
17-12-52	132-8	140	107-8	1140-10	1205-9	1148	1730-9	1718-9	1728	366-9	342	344
18-12-52	132-8	*	110	1196-15	1222-10	1160	1768-15	1752-12	1760	366-9	342	344
19-12-52	135	*	110	1173-1	1231-3	1160	1730-9	1727-2	1792	366-9	342	352
20-12-52	135	140	100	1178-2	1214-2	1152	1740.13	1727-2	1792	370-14	350-9	352
21-12.52					SUNDAY							
22-12-52	130	*	100	1172-3	1188-7	1152	1722-1	1727-2	1768	370-14	350-9	344
23-12-52	130	*	105	1172-3	*	1120	1725-7	*	1752	366-9	*	344
24-12-52	130	137.8	102-8	1155-2	1179-14	1136	1700-12	1710	1744	366-9	350.9	344
25-12-52	*	*	108-12	*	*	1136	*	*	1744	*	*	340
26-12-52	130	*	108-12	1156	1162-13	1124	1696.8	1718-9	1728	366-9	342	340
27-12-52	132	135	108-12	1146-10	1145-11	1128	1679-7	1683-8	1724	366-9	333-7	340
28-12-52					SUNDAY							
29-12-52	135	*	120	1163-11	1137-2	1128	1722-1	1727-2	1716	358-1	333-7	340
30-12.52	140	*	122-8	1172-3	1162-13	1136	1739-2	1744-3	1728	349-8	333-7	348
31-12-52	*	137-8	125	*	1162-13	1152	*	1744-3	1744	*	348-13	348
1-1-53	*	*	127-8	*	1162 13	1152	*	1727-2	1760	*	333-7	352
2-1-53	135	*	127-8	1159-6	1171 6-0	1168	1726-5	1701.7	1792	341	329 3	352
3-1-53	135	135	127-8	1142-6	1145-11	1168	1696-8	1701-7	1792	341	329-3	352
4-1-53					SUNDAY							
5-1-53	132-8	*	126-4	1140-10	1197	1152	1709-4	1718 9	1760	341	333-7	352
6-1-53	135	*	133-12	1159-6	1188-7	1152	1722	1744 3	1760	341	324-14	352
7-1-53	140	*	137-8	1171-5	*	1184	1739-2	*	1792	341	*	352
8-1-53	140	*	137-8	1180.11	1188-7	1184	1756 2	1744.3	1792	341	324-14	352
9-1-53	142-8	*	137-8	1193.8	1131-3	1200	1777-7	1769-14	1808	341	324-14	356
10-1-53	145	*	140	1206-5	1222-10	1216	1798-12	1795.8	1840	341	324.14	356

* No Supply.

Trend of Coconut Oil Price in Cochin

THE apprehension felt in trade circles and reported in the "Bulletin" for December 1952 that the price of coconut oil might fall below Rs. 1534 per ton did not materialize, thanks to prices appreciating in the Ceylon markets consequent on inadequacy of stocks and some foreign purchases. There were, however, no definite trends for the price at Cochin. It varied between Rs. 1632-9-0 on the 10th December and Rs. 1763-15-0 on the 18th December, rising or falling according as there were demands from Bombay and Calcutta buyers. From the 29th December there was a fall until the price stood at Rs. 1696 on the 3rd January 1953. Since then, however, the tendency has been for an improvement, the price on the 10th January, being Rs. 1798 per ton. There has been good buying from Calcutta and Bombay dealers as Cochin oil has been comparatively cheaper for them than Colombo oil. The improvement in the oilseeds and bullion markets also has helped to strengthen the position of coconut oil. Besides purchases by well-known soap manufacturers, there has been booking of oil by rail to Northern India. The improved position is expected to persist until the new season's copra begins to arrive in the market.

II. BOMBAY

The weekly wholesale prices of coconuts, copra, coconut oil and coconut oil cake at Bombay during the month of December 1952 are given below:-

Date	Coconuts per 1000						Copra per candy of 224 qrs.			Coconut oil price naked per quart.	Oil Cake per bag of 168 lbs.
	New			Old			Milling	Edible			
	Small	Medium	Large	Small	Medium	Large		Rajapur	Alleppey		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs
4—12—52	165	220	275	180	275	365	345	345	330	22—4	26
11—12—52	150	205	270	160	261	365	340	350	335	22-12	26
18—12—52	140	200	300	150	240	350	367	365	340	23-12	26
26—12—52	140	195	280	150	240	325	370	375	355	23-12	27

III. COLOMBO

The weekly prices of coconuts and coconut products at Colombo during the month of December 1952 are given below.

Commodity.	Unit.	2-12-52 Rs. Cts.	8-12-52 Rs. Cts	15-12-52 Rs. Cts.	22-12-52 Rs Cts.	29-12-52 Rs. Cts.
Fresh Coconuts—(Husked) used for copra making and local consumption.	Per 1000 nuts	170·00 to 175·00	167·00 to 172·00	170·00 to 175·00	170·00 to 175·00	170·00 to 175·00
Copra— Estate No. 1 Quality at Buyer's store.	Per Candy of 560 lbs.	187·50	182·50	180·00	185·00	190·00
Desiccated Coconut—wharf delivery or Buyer's stores—Medium and fine 50%.	Per lb.	0·47	0·46	0·46	0·47	0·49
Coconut oil—white, naked, wharf delivery	Per ton.	1150·00	1175·00	1175·00	1250·00	1200·00

Commodity	Unit	6-12-52 Rs. Cts.	13-12-52 Rs. Cts.	20-12-52 Rs. Cts.	27-12-52 Rs. Cts.
Coconut (Husked) for export at Buyer's stores	Per 1000 nuts	342·00	No information	342	342

Intercultivate your Coconut gardens regularly and manure your trees properly and get best results

IV. Straits Settlements

The weekly prices of coconut products at Singapore and Penang during the months of November & December 1952 are given belew.

	Singapore		Penang	
	Copra	Coconut oil	Copra	Coconut oil
November 1952	$	$	$	$
1st week	36·00	54·00	35·00	54·00
2nd week	35·00	54·00	35·00	54·00
3rd week	34·50	53·00	34·50	53·00
4th week	33·00	52·50	33·00	52·50
December 1952				
1st week	34·40	53·00	34·00	53·00
2nd week	35·50	54·00	35·00	54·00
3rd week	37·75	55·00	38·50	55·00
4th week	38·50	55·00	39·00	55·00

Coconut Oil Cake: Prices remained at $ 12 per picul during November 52 and advanced to $ 14·50 during December 52 per picul

The prices quoted above are per picul f. o. b. Singapore and Penang respectively inclusive of cost of containers, *i. e.* second hand steel drums in the case of coconut oil and gunny bags in the case of copra.

One picul=133⅓ lbs. One St. Doller=Rs. 1-9-0

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SECRETARY,
INDIAN CENTRAL COCONUT COMMITTEE,
Ernakulam.

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E. 476, E. 665, E. 672, E. 674, E. 676, E. 688, E. 703 and E. 1058.

Reg: Numbers of subscribers whose subscriptions expire with the issue of the Bulletin for February 1953 provided half anna more is remitted.

E. 274, E. 347 and E. 675.

V. Malabar Markets

Arrivals and sales of coconuts and copra in the different markets in Malabar during December, 1952.

Commodity and Market	Carry-over	Arrivals	Sales	Balance
Coconuts (in thousands)				
Kozhikode	768	3,631	3,729	670
Badagara	319	1,690	1,597	413
Ponani	1,108	1,590	1,430	1,269
Tellicherry & Dharmadam	66	547	519	94
Copra (in candies of 700 lb)				
Kozhikode	998	3,500	3,552	946
Badagara	1,359	5,388	5,295	1,452

Weekly prices of coconuts and copra in some of the Malabar markets during December, 1952.

Commodity and Market	1st week Rs.	2nd week Rs.	3rd week Rs.	4th week Rs.
Coconuts Husked (for 1000)				
Badagara	90	90	100	100
Ponani	110-115	110-120	120-125	115-125
Tellicherry & Dharmadam	122-122½	122½-125	125-130	130-135
Copra at Badagara Market per candy of 700 lbs.				
Office	300	348	348	350
Edible Copra				
Dilpas	350	350	355	360
Madras	350	350	355	360
Rajapur	355	365	370	380

V. Import of coconuts, copra and coconut Oil into India during the months of October and November 1952

OCTOBER 1952.

COMMODITY AND SOURCE	STATE INTO WHICH IMPORTED								TOTAL FOR ALL STATES FOR THE MONTH		TOTAL FROM THE BEGINNING OF APRIL, 1952	
	TRAV-COCHIN		MADRAS		BOMBAY		WEST BENGAL					
	QTY.	VALUE RS.	QTY	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS
COCONUT Nos.												
Ceylon	...	...	3,77,000	1,07,880	...	...	...	...	3,77,000	1,07,880	6,23,000	1,70,849
St. Settlements	...	...	...	...	...	...	...	...	...	...	100	44
TOTAL	...	...	3,77,000	1,07,880	...	...	...	...	3,77,000	1,07,880	6,23,100	1,70,893
COPRA (in cwts.)												
Ceylon	13,597	5,36,801	...	...	33,780	18,35,413	...	...	47,377	23,72,214	2,46,984	127,73,937
Maldives	...	...	...	...			...	...	...	...	60	2,754
St. Settlements	...	...	...	...	7,040	3,27,250	...	...	7,040	3,27,250	18,100	8,47,474
Seychelles	...	...	...	...	...	...	...	...	...	...	31,080	15,63,064
F. M. S.	...	...	...	...	...	...	...	...	...	...	8,500	5,60,700
TOTAL	13,597	5,36,801	...	...	40,820	21,62,663	...	...	54,417	26,99,464	3,04,724	1,57,47,929
COCONUT OIL (in cwts.)												
Ceylon	...	...	...	...	6,815	5,27,150	55	6,316	6,870	5,33,466	1,01,684	70,91,255
St. Settlements	...	...	...	...	2,750	2,68,000	7	759	2,757	2,68,759	1,08,685	77,96,946
F.M.S.	...	...	...	...	...	...	...	...	...	...	2,188	1,55,946
Philippines	...	...	...	...	...	...	...	...	...	...	31,575	19,95,778
TOTAL	...	...	...	...	9,565	7,95,150	62	7,075	9,627	8,02,225	2,44,132	1,70,42,925

COMMODITY AND SOURCE	STATE INTO WHICH IMPORTED								TOTAL FOR ALL STATES FOR THE MONTH		TOTAL FROM THE BEGINNING OF APRIL, 1952	
	TRAV-COCHIN		MADRAS		BOMBAY		WEST BENGAL					
	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY.	VALUE RS.	QTY	VALUE RS.
COCONUTS Nos.												
Ceylon	...	...	4,30,000	1,08,627	...	...	...	...	4,30,000	1,08,627	10 53,000	2,79,476
St. Settlements	...	...	...	...	...	...	...	...	...	...	100	44
TOTAL	...	...	4,30,000	1,08,627	...	...	...	...	4,30,000	1,08,627	10,53,100	2,79,520
COPRA (in cwts.)												
Ceylon	6,500	2,64,974	3,500	1,38,282	5,580	3,36,250	...	...	15,580	7,39,506	2,62,560	1,35,13,443
Maldives	...	...	...	...	...	...	...	...	...	...	60	2,754
St. Settlements	...	...	...	...	...	...	...	...	...	...	18,100	8,47,474
Seychelles	...	...	...	...	10,920	6,47,603	...	...	10 920	6,47,603	42,000	22·10,667
F. M. S.	...	...	...	...	...	...	...	...	...	...	8,500	5,60,700
TOTAL	6,500	2,64,974	3,500	1,38,282	16,500	9,83,853	...	...	26,500	13,87,109	3,31,220	1,71,35,038
COCONUT OIL (in cwts.)												
Ceylon	...	...	50	3,900	14,270	11,38719	11,120	10,75,217	25,440	22,17,836	1,27,124	93,12,091
St. Settlements	...	...	...	...	3,500	3,27,500	8,619	7,14,372	12,119	10,41 872	1,20,804	88 38,818
F. M. S.	...	...	...	...	10,311	9,82,942	2,500	2,36,912	12,811	12,19,854	14,999	13,75,800
Philippines	...	...	...	...	...	...	...	...	...	...	31,575	19,95,778
TOTAL	...	...	50	3,900	28,081	24 49 161	22,239	20,26,501	50,370	44,79,562	2,94,502	2,15,22,487

Prize for Arecanut Husking and Slicing Machine.

The Indian Central Arecanut Committee has decided to award a prize of Rs. 2000 to any person or body who designs the best model of a time-saving and economic machinery for husking arecanut in all stages of maturity and capable of slicing the kernals and demonstrates its working to the satisfaction of the Committee or a competent body appointed by it.

Further details regarding the prize can be obtained from

The Secretary, Indian Central Arecanut Committee,
Post Box No. 14, Kozhikode.

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COCONUT GROWERS'

DO'S & DON'TS

1. Grow the Coconut only in suitable and well-drained lands.
2. If you plant the coconut on sloping lands, terrace and erect bunds wherever necessary.
3. Plant only the best selected coconut seedlings to make the garden most remunerative— Government Nurseries supply the best seedlings.
4. Plant the seedlings at proper depth according to the height of water table in the locality.
5. Manure the coconut trees properly — Ammonium Sulphate (4½ lb.) or Groundnut cake (13½ lb.), Ash (20 lb.) and Green leaf (100 lb.) per tree per year are the best manures for the coconut.
6. Inter-cultivate your coconut gardens every year — Regular cultivation is as important as manuring.
7. Regularly search for pests and diseases and take timely measures against them.
8. Harvest coconuts only when they are fully mature — Fully mature nuts yield the best copra and in largest quantity.
9. To get the best quality of copra, thoroughly dry the kernels.

1. Don't plan't the coconut in water-logged soils.
2. Don't plant the coconut at less than 25 feet apart — Ower-crowding reduces the production of nuts.
3. Don't plant seedlings of doubtful quality.
4. Don't postpone the treatment against pests and diseases.
5. Don't harvest immature nuts for copra making.

Take care of your Coconut garden- the Garden will take care of you.

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—**The Malabar Herald** (*Cochin*)

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