VOL. XVII NOS. 7 & 8
OCTOBER & NOVEMBER 1963

PUBLISHED
MONTHLY

Editor
DT. P. J. GREGORY

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.

Editorial

Spray your coconut palms

THE DISEASES THAT AFFECT THE COCONUT PALMS AND REDUCE THEIR yield are many in number; but the root (wilt) and leaf (rot) diseases are the most serious ones which affect the palms in the most important coconut growing area in our country viz., Kerala. In this State these diseases have spread to five districts causing considerable loss in yield.

THOUGH IT HAS NOT YET BEEN POSSIBLE TO FIND OUT A CURE FOR the root (wilt) disease, it has been proved that regular spraying of the palms with a copper fungicide can keep the leaf (rot) disease under control and that palms affected by the root (wilt) can be made to give economic yields by regular manuring, cultural operations and spraying.

SPRAYING THE COCONUT PALMS IN THE DISEASE AFFECTED REGIONS regularly with Bordeaux mixture or a solution of any other copper fungicide is thus an operation of special significance.

IT HAS TO BE DONE AT LEAST TWICE A YEAR ONCE IN JANUARY-FEBRUARY or April-May and again in September-October. Not only the diseased palms but the healthy palms, too, have to be sprayed as a prophylactic measure. Coconut growers in the concerned areas are therefore advised to take to regular spraying of their palms twice a year.

IN KERALA, THE STATE GOVERNMENT IS OPERATING A SCHEME UNDER which the coconut trees in the disease-ridden districts are regularly sprayed for a nominal fee of six naye paise per spraying. Coconut growers in these districts are advised to take full advantage of this scheme by contacting their nearest agricultural officers and getting their palms sprayed.

USE OF ATTRACTANTS and REPELLENTS IN PEST CONTROL

By
CHANDY KURIAN & G. B. PILLAI
Central Coconut Research Station, Kayangulam

ATTRACTANTS are materials that are utilized to attract insects into traps and to induce them to eat poisoned baits, i. e. stimulants that elicit a positive directive response. Repellents or deterrents are those chemicals which generally secure protection for plants, man and livestock against insect attack by repelling them. The use of repellents has gained importance, particularly during the Second World War and afterwards, and much work has been done during the last few years. Until then the bulk of effort expended in the study of attractants and repellents has expressed itself as a search by the trial and error method for chemicals that are effective for the control of insect pests.

Kinds of Attractants and Repellents

The attractiveness of nectar to bees and of light to myriads of other insects is proverbial. The attractants and repellents are broadly grouped into physical and chemical. The physical attractiveness

may be subdivided into the following types: thermo-, photo- and mechanostimuli, the latter including contact, pressure and sound. Heat upto certain optimum levels acts as an attractant and beyond that point as a repellent. The attractiveness of light to some insects is axiomatic. Less publicised is the attractiveness of darkness to some species of insects. Among phytophagous insects, especially the physical nature of the surface may determine the acceptability or non-acceptability of a plant as food. Hairs, spines and pubescence commonly confer immunity upon plants to such an extent that these plants are successful resistant varieties. Species with shiny wax cuticles may be as effectively repellent to other insects. Red palm weevils of coconut do not generally infest old palms with hard stems, but are observed to infest young palms with somewhat succulent stem. The specific attraction of ovipositing insects to the food plants in their younger stages is well known.

Among chemical attractants and repellents humidity, tastes and odours, particularly sex scents and food odours may be considered to be the most important. Fermentation products in many plants are either suitable as food for insects or as attractants indicating the presence of food or oviposition sites. *Oryctes rhinoceros*, the enemy No. I of coconut, is attracted to decaying coconut stem for oviposition, and the decayed portions of the stem form an ideal food for the grubs of the beetle. Many adult insects are attracted to and feed upon sweet and fermenting liquids. The red palm weevils are attracted to the injured portions on the crown of young palms. Due to the same reason the palms attacked by *Oryctes* are found to be more vulnerable to red palm weevil attack. The injury caused by the chewing of *Oryctes* on the tender unopened leaves of coconut is often followed by decay of the injured part and this is quite often accompanied by the entry of red palm weevil, that is attracted towards the fermenting smell of the decaying crown. It is often observed that the weevil is attracted to trees that are tapped for toddy.

Modern use

Since killing insecticides could be used effectively against almost all pests, the control of insects by attractants and repellents has not become very popular. Whether or not an insecticide or any other chemical is a repellent depends to a great deal on the definition of repellency and the circumstances of the experiment. Failure to eat a material has also been taken as a sign of repellency, but is not in itself a proof of repellency. Chamberlain and Hoskins (1949) found that DDT was repellent to termites when a choice between a treated and untreated surface was possible. Under some conditions comparative counts of insects on treated and untreated surfaces have shown DDT to be an attractant (Kennedy 1947).

Several repellents like coaltar, "Mason mixture" etc., were tried at the Central Coconut Research Station, Kayangulam to ward off *Oryctes* attack on palms, but with very little success. There are instances where repellents have been very successfully used against noxious insects. During the Second World War many thousands of possible repellent compounds were tested against mosquitoes and these investigations

resulted in the development of several compounds of outstanding importance as repellents for use against mosquitoes and certain biting flies.

Need for Further Research and Co-ordination

There is no known record of use of insect attractants by primitive man. From the preceding paragraphs it may be clear that greater impetus to research in this field is needed in the realm of pest control. For a better understanding of the problem an awareness of the chemical, physical, physiological and botanical background immediately involved and the compilation, interpretation and evaluation of the scattered works on the subject now available is an essential pre-requisite. At the present time the most critical evidence suggests that attractants and repellents act directly on the chemo-sensory system. Weismann and Lotmar (1949) showed that *Musca* and *Stomoxys* deprived of their antennae, the principal loci of olfactory receptors, were unable to direct themselves away from vapour repellents.

It is expected that more lively interest in attractants and repellents will lead us to a more thorough understanding of insect behaviour and ecology and in certain cases to a fuller understanding of the evolution of certain habits and behaviour patterns. Answers to some of the puzzles of host parasite relationships, food and plant preferences and physiological races are also bound up in this study. Basic knowledge acquired from studies of this nature may be applied with profit to the development of insect resistant plant varieties.

1. Chamberlain, W. F. and Hoskins, W. M. *Hilgardia*, 19: 285-307 (1949)
2. Kennedy, T. S., *Bull. Ent. Res.*, 37: 593-607 (1949)
3. Weismann, R. and Lotmar, R., *Acta Trop.*, 6: 293-349 (1949).

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Coconut Development in Kerala

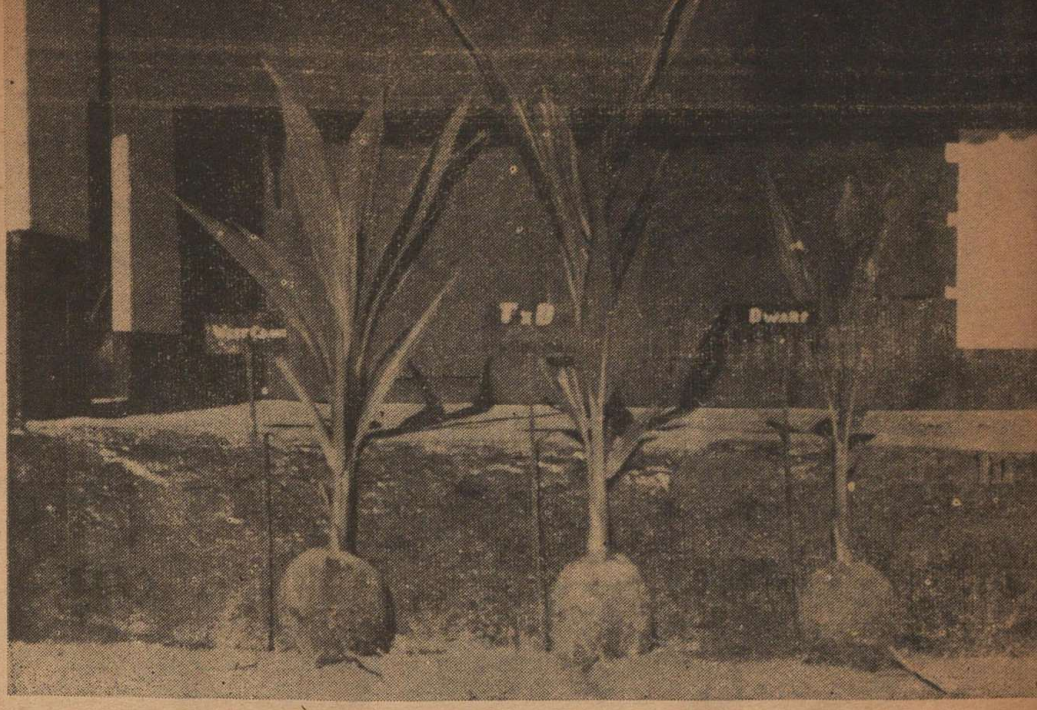
Contributed

COCONUT is perhaps the most useful of all the palms of the tropics. Every part of it is useful to man in one way or other.

Though the natural home of coconut is a much debated topic among the scientists, its cultivation is known in India since time immemorial. The palm is nobly described in our ancient literature as "KALPAVRISHA"- the tree that grants all that one wishes.

Kerala's Chief Cash Crop

In Kerala the coconut is the chief cash crop of the ordinary cultivator and it plays a very significant role in the State's economy. Coconut palm is the soul and spirit of the two major industries of the State–coir and copra–which employ more than six lakhs of people during the various stages of production, and over ten lakhs of people are dependent on these two industries both



T x D seedling

directly and indirectly for their livelihood.

India stands second to Philippines in the matter of area and production of coconut. She contributes 19 per cent of the area and 25 per cent of the coconut in world. In India, Kerala leads the rest of the country in the matter of coconut cultivation contributing about 70 per cent of the acreage and an equal percentage to the production. According to the statistics available during 1960–61 the coconut production in the State was 324.7 crore nuts from 12,74,000 acres. 85 per cent of the copra and 80 per cent of the coconut oil produced in India is Kerala's share.

Contribution to Economic Prosperity

The total value of the agricultural produce of Kerala during 1960–61, is calculated at Rs. 180.8 crores. Of this coconut alone contributed Rs. 51.8 crores. No other testimony is required to depict the predominant place it occupies in the agricultural economy of the State.

Wipe off the Deficit

Parodoxically enough in spite of its premier position in coconut production, India is compelled to import coconut and coconut products to the tune of Rs. 15 crores every year just to meet the fast growing demands of the industries. This huge drain of foreign exchange will have to be minimised to the maximum extent possible immediately. The problem facing India is not only to tide over the deficit but also to produce more coconuts. Kerala being the premier coconut producing unit, India has naturally to look mainly to this State to

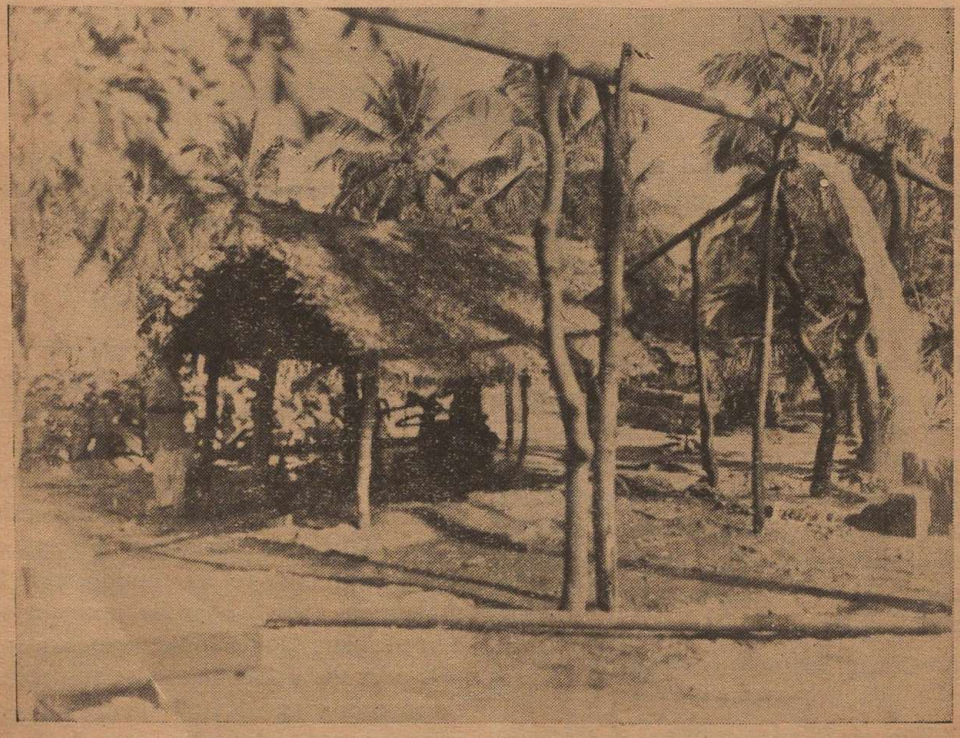
launch a concentrated effort for the achievement of the above object. The life line of the coconut development schemes included in the Third Five-Year Plan of Kerala is the realisation of the above mentioned aim. The additional production intended to be achieved during the Third Five-Year Plan period is 500 million nuts. It will be both informative and interesting to the readers to know the details about the progress of the coconut development schemes included in the Third Five-Year Plan.

Demonstration for Education

During the Second Five-Year Plan more than 230 demonstration plots were run with a view to educate the coconut growers about the advantages of manuring the coconut palms. This experience has convinced that there exists vast scope for enlarging this activity and 800 demonstration plots at the rate of one demonstration plot for about every lakh of coconut trees are laid out during the Third Plan period. All the 800 plots have already been selected and work is in progress in the demonstration gardens.

Fertilizers through Co-operatives

The role of fertilizers to increase the coconut production has to be fully exploited. To make fertilizers available in plenty a scheme costing Rs. 160 lakhs has been envisaged during the Plan.



Irrigation of coconut gardens

The fertilizers are given on credit to the coconut growers through service co-operative societies. As a major portion of the targeted additional production of coconut has to come as a result of this scheme it requires the unreserved co-operation and goodwill of all the enthusiastic coconut growers. During the last year Rs. 9.81 lakhs have been issued as loan, and loans to the tune of Rs. 40 lakhs will be issued during current financial year.

Quality Seedlings from Quality Seednuts

Coconut is a perennial crop that lasts for about 100 years. The palm that comes into bearing by the eighth year of the planting continues to yield for 80 to 100 years. This underlines the necessity of producing and planting good quality seedlings. The palms of the many existing gardens are poor, shy or indifferent bearers and some are diseased. To meet the underplanting and new planting requirements, it is proposed to produce and distribute annually six to eight lakhs of seedlings from the 2nd year of the Plan period. The State Agriculture Department is running seventeen coconut nurseries. In addition to that 27 small coconut nurseries are run by the N. E. S. Blocks also. Over 10 lakhs of seednuts are required to meet the requirements of the above nurseries. Collecting quality seednuts from the good mother palms from the disease-free coconut tracts of Kerala, forms one of the major items of coconut development activities of the department. During 1961-62 and 1962-63, 7,65,050 and 8,30,000 quality seednuts had been collected and sown. From the next year onwards the collection will exceed 10 lakhs of nuts.

Organised and Enlarged Spraying against Diseases

The coconut diseases continue to be a serious menace to the ordinary

Seednut selection

prehensive spraying scheme to control the coconut diseases is continued during this Plan period also on a much organised and enlarged manner. During the first two years of the III Plan period 180 lakhs of sprayings were conducted. Vigilant supervision has been organised to make the spraying prompt and effective.

Reclamation & Irrigation

There exists some scope for bringing additional area under coconut by the reclamation of the shallow *Kayal* lands. Seventy-eight acres of *Kayal* land has been reclaimed and Rs. 2.53 lakhs has been distributed to the farmers in the form of long term loans during the first two years of the Third Plan.

Coconut is grown in Kerala as a rain-fed crop. But due to severe drought in certain areas the production goes down and it is observed that by providing irrigation facilities the coconut production can be enhanced. It was felt that paucity of funds is the chief limiting factor for the coconut growers to arrange for irrigation. A scheme to issue pump-sets on hire purchase is getting more and more popular with the coconut growers. During the first two years 155 pump-sets have been distributed to cultivators on hire purchase system.

Biological Control Measures to Continue

Nephantis serinopa is a serious pest of the coconut in the coastal areas. To control it by biological method six parasite breeding stations are in operation in the State. During the last two years ten million parasites were released.

Research to be Strengthened

The two major coconut research stations of the country are situated in the State. These Stations are under the control of Indian Central Coconut Committee. Apart from these two, there are three Regional Coconut Research Stations run by the State. Steps are being taken to strengthen the above stations to tackle the regional problems.

Need of the Hour

The development of coconut cultivation is sure to play a significant role in the economic prosperity of the State and people of Kerala. A united front of extension workers, researchmen co-operatives and above all the farmers is indispensable for the successful implementation of the various schemes. This is the need of the hour more than ever before especially when the country is facing a national emergency.

Coconut Development and Research in Assam

By
P. R. NATH
Research Officer,
Regional Coconut Research Station, Kahikuchi, Assam

Introduction

ALTHOUGH coconut is a tropical palm and thrives best in the tropical climate, yet it is also found to grow well in some places like Assam in the sub-tropical region and far away from the sea. Assam is situated in the sub-tropical belt adjacent to the tropical zone and thus has had the influence of the tropical climate to an appreciable extent.

Possibilities

Assam offers considerable scope for expansion of the coconut cultivation in the rich alluvium of the Brahmaputra valley especially in the districts of Kamrup, Nowgong and Darrong, where the rainfall is fairly high and more or less well distributed and other factors are suitable for the crop. In favoured soils, situations, and climatic conditions, the trees are found to do eminently well

combining high yield with a long span of profitable life. In old alluvium and also in the sub-montane tracts, the trees do thrive well although their performances are a bit inferior to those in the fertile alluvium. The existing trees are generally free from major insect pests and diseases except the depredation of the rhinoceros beetle. The crop has not been worked, so far, systematically. Suitable land is also available. The districts of Kamrup, Nowgong, Darrong, Goalpara and Sibsagar may readily offer not less than 25,000 acres of suitable fertile land for immediate expansion of the crop on a plantation scale. In Assam, coconut is never grown on a plantation scale but scattered in domestic holdings thus offering wide scope for its expansion and improvement on scientific lines.

Present Position

According to a random survey carried out by the Department of Agriculture in 1957–58, the area under coconut has been estimated at about 5,500 acres with an annual production of 22 million nuts. The average yield per acre per annum has been calculated at 4,200 nuts by taking on an average 70 palms per acre and 60 nuts per tree per year. The plantation is mainly concentrated in the districts of Kamrup, Nowgong and Darrong, of which Kamrup alone claims more than 50 per cent of the total acreage and production. The district–wise distribution of area and production as collected from the State Horticulturist is furnished below:

District	Area in acres in 1957-58	Production in thousand nuts (1957–58)	Production per acre
Kamrup	2,500	10,000	
Nowgong	1,200	4,80)	
Darrong	1,100	4,400	
Sibsagar	300	1,200	4,200 nuts
Goalpara	150	600	
Lakhimpur	100	400	
Cachar	100	400	
Hill Districts	50	200	
Total	5,500	22,000	4,200 nuts

The position with regard to area and production in the State has further improved after 1957–58. It will be now about 10,000 acres with an annual production of about 25 million nuts. The scope for expanding the coconut cultivation in the Third and the subsequent Plan periods is therefore encouraging. There are, of course, local problems confronting the coconut industry which can be gradually solved by strengthening the research wing and affecting proper co-ordination with the development side. The resources available in the State, if

properly utilised, may no doubt contribute much towards self-sufficiency of the State in coconut and coconut products. With this object in view, a few schemes on coconut including a Research Scheme have been taken in hand in the State.

Present Work Development

The object of the development schemes is to help expand the coconut cultivation in the State by supplying quality coconut seedlings to the growers at a reasonable price and thereby increase the production of coconut. At the beginning, the Scheme for coconut cultivation in Assam comprised only few nurseries with low targets of production. The number of the nurseries has now increased upto 20 which are located in the different districts of the State.

The anual targets for collection of roughly 1,00,000 seednuts and production of 60,000 seedlings have been fixed during the Second and Third Plan periods.

So far, 3,08,496 of quality seedlings have been distributed to the cultivators from the Departmental nurseries during Second Plan period and upto 1962–63 of the Third Plan period.

The information on targets of collection of nuts and production of seedlings, the actual quantity of nuts collected and distribution of quality seedlings as collected from the State Horticulturist are furnished below:

Year	Target for collection of nuts	Actual quantity of nuts collected	Target of production	Seedlings distributed	Remarks
1956–57	10,000	—	5,000	—	
1957–58	10,000	9,400	5,000	3,410	
1958–59	1,00,000	77,800	60,000	43,906	
1959–60	1,00,000	98,000	60,000	60,921	
1960–61	1,00,000	98,000	60,000	1,05,411	
1961–62	1,00,000	87,500	60,000	43,767	
1962–63	1,00,000	87,500 *	60,000	36,081 *	The production will be available for sale in 1963-64.
Total	5,20,000	4,57,800	3,10,000	2,93,496	
Coconut Nursery Scheme Kahikuchi from 1956–57 to 1961–62	42,000	32,000	25,000	15,000	
Total	5,62,000	4,89,800	3,35,000	3,08,496	

The area covered owing to the distribution of 3,08,496 seedlings may be estimated at 4,407.19 acres or roughly 4,400 acres. The additional production expected out of the increase in area is about 18.48 million nuts per year when all the trees come to bearing. The total acreage under coconut in Assam at the end of 1962–63, therefore, comes to 9,900 acres or approximately 10,000 acres including acreage covered by supplies from the private nurseries.

This may come to about 12,000 acres at the end of Third Plan period, in which case the total production of nuts will be in the order of 48.88 million nuts per year when all the trees bear fruits in due course. It gives us an idea as to how the cultivators are taking up the development of the coconut industry in the State progressively with interest.

Research

Assam with varied soils, situations and climatic factors and the rain-fed conditions in which the crop is grown, presents a series of problems peculiarly her own. No systematic research on coconut has, so far, been undertaken. A Regional Coconut Research Station has been established in Assam to deal with the regional problems. But, it will take time before the Research Station can effectively deal with such problems, as it was not possible to locate the Station in the existing plantation to achieve immediate results. The programme of work of the Station comprises the nursery studies, introduction of exotic varieties, cultural and manurial aspects and control of insect pests and diseases of coconut.

Nursery Studies

From a comparative study conducted with regard to the germination of individual seednuts and morphological characters of the seedlings of local tall and West Coast tall variety, it appears that the germination of west coast tall variety is significantly superior to that of the local tall. Other characters being identical, the west coast tall variety has also been provisionally recommended for growing side by side with local tall variety in Assam.

Shri. S. N. Sarmah, Revenue Minister, Assam, planting a coconut seedling at the Regional Coconut Research Station, Kahikuchi.

Apart from this, trials on the mode and time of planting seednuts in the nursery beds for raising seedlings were also conducted with local tall variety seednuts and results achieved.

So far mode of planting is concerned, it has been found that under the conditions obtaining at Kahikuchi, it is desirable to sow seednuts in beds horizontally or obliquely for raising seedlings.

As for the time of planting, it has been established that under the conditions obtaining at Kahikuchi, it is desirable to plant seednuts in beds for raising seedlings from March to May.

As the State is procuring huge quantity of planting materials from Kerala, the trials have again been laid out with west coast tall variety seednuts for confirmation.

Introduction of Exotic Varieties of Coconut

A beginning has been made to introduce exotic and extra-State varieties of coconut into Assam to study their suitablity under local conditions and to find out promising high yielding varieties, if any, for multiplication and distribution. So far, Andaman Giant, Fiji, Philippine, Strait Settlement, Dwarf, 'T' x 'D' Hybrid, Kappadam, Laccadive ordinary, Laccadive small, Java, Cochin China, Gangabondam etc. have been introduced and are under observation.

Depth of Planting

The object of the experiment is to find out appropriate depth of planting coconut seedling in pit. From a trial conducted at the Station, it has been established that under the conditions obtaining at Kahikuchi, it is not desirable to plant coconut seedlings in pits below 12 inches or 30.5 cms. from the ground level.

Plantations under manurial and cultural experiments have also been initiated and are in progress. Studies on the suitability of green manure crops for coconut gardens have also been taken up.

Insect Pests & Diseases

As regards insect pests, the rhinoceros beetle has been found to be the most destructive pest of coconut in Assam. The badly affected areas are Nalbari, Hajo, Tihu, Kamalpur, Tezpur and Phulaguri. The incidence of the beetle is found to be severe during July to October. Control and prophylactic measures have been taken on a limited area. A rhinoceros beetle trap trial is also in progress at the Station. Although it is too early to speak anything on this, measures taken seem to be effective in controlling the pest to a certain degree.

As for the diseases of coconut, no major incidences of any diseases have so far been noticed except bud-rot and leaf spot to a certain extent. Control measures have been taken on a limited area.

Cultivation Practices

Generally speaking, improved cultivation practices of coconut are unknown, although some progressive cultivators have been slowly taking it up. No systematic methods of selection of planting materials, planting of seedlings, management of plantation and measures against insect pests and diseases are followed by the cultivators.

The selection of seednuts is done by eye-judgement. The nuts are harvested from mature bunches of aged palms as well as from young ones. The best and big-sized nuts of the lot are selected and allowed to sprout under

shed or cool places. Sprouted ones are generally planted in the beds. Selection of seedlings is also based on eye-judgement. Proper alignment and spacing are seldom followed in planting seedlings. It is grown scattered in domestic holdings and never on a plantation scale. Pits are usually dug at the time of planting and surface planting is the general rule. Although aged seedlings are preferred, yet small seedlings are also planted. The practice of adding common salt to the seedlings and at subsequent stages to the trees is in vogue. This may help in warding off the white ant attack to the seedling. But, the common belief is that the common salt bears some manurial value. The plantation may be termed as mixed. Weeding, cleaning, watering etc. are casually attended to at the seedling stage. After–care is not bestowed to the plantation and measures to control insect pests and diseases are unknown.

Harvesting of nuts is irregular. Generally, there are two major harvests-one in summer and the other in winter. The former is ready for harvest during summer or ahu paddy season and the latter during winter or sali paddy season of the State and as such popularly go by the name of Ahu and Sali respectively. There seems to be however no such two distinct varieties of coconut in Assam.

Propaganda & Publicity

From above, it appears that there is a vast field for propaganda and publicity work in Assam and is possible to improve the cultivation by disseminating available knowledge and information to the cultivators on the subject. There is no separate scheme for carrying out propaganda and publicity work on coconut. It is done by the Research and the District staff in the course of their normal duties. Advisory guidances are given to the growers on the expansion of the cultivation and manurial and cultural aspects. Articles and pamphlets on different aspects of coconut cultivation are published in the local papers and departmental journals. Talks are also broadcast over All India Radio. Coconut Day is also observed every year in co–operation with the local villagers. Ceremonial planting is done and discussion held on the occasion for giving wide publicity to the expansion of the coconut cultivation, proper management of the plantation and control of insect pests and diseases with the ultimate aim of getting increased production.

Conclusion

The coconut industry in the State is still in its initial stage. There is no co-relation between demand and supply. The demand for nuts for consumption and propagation purpose is great and on the increase day by day. The supply is inadequate owing to small acreage and limited production.

It is, however, hoped that with the expansion of the coconut cultivation, it will be possible to increase the overall production of nuts and rectify the imbalance between demand and supply within a reasonable period of time.

Plans for coconut improvement in Orissa

By
S. S. S. VENKATARAO
Coconut Research & Development Officer, Orissa

PLANNING in any branch of science or art should be based on past achievements, present condition and future prospects. At the same time when once planning has been made for the improvement of anything there should be a periodical review of the achievements, handicaps that prevented the planned progress and a positive action to overcome the handicaps and take steps to see that such lapses do not arise in future. United we stand, divided we fall being the motto that should be kept in mind always, it appears appropriate that the fundamental pre-requisite for any planning is the envisaging of the co-operative effort.

In the case of coconut palm and its production in Orissa till about the beginning of the Second Five-Year Plan, there have been no serious and positive efforts undertaken in a planned way. In the old Bihar and Orissa Province the possibility of expanding the coconut

plantations in the seacoast on the pure sand were envisaged and an agricultural farm of nearly 30 acres was started perhaps in the early twenties of this century at a place hardly five miles from Puri, exclusive for demonstrating the cultivation of coconut palms to the people of the locality. The concept at that time appears to be an obvious comparison between the growing of coconut palms almost touching the sea waves in the west coast of India on pure sand and the absence of them under similar conditions in the east coast. The plantation has since failed here for various reasons and the farm is now being run as a general agricultural farm growing mangoes, a little of paddy and other fruit trees and supplying grafts of mango etc.

The next effort was to raise a Government Coconut Nursery in this Farm and supply 10,000 quality seedlings annually to the growers. This nursery was started in the year 1945. But it was soon discovered that there is a left over of seedlings and as such a portion was shifted to Cuttack and located in the then Agricultural Farm (present Central Rice Research Institute) and the targets for Puri and Cuttack were fixed at 6,500 and 3,500 quality seedlings respectively. This happened in 1948.

In the same year a Regional Coconut Research Station was started on a 66-acre paddy plot at Sakhigopal. There was a tank of nearly an acre and about 317 bearing coconut palms in the area. This Research Station was meant to tackle the cultural and manurial problems on coconut with special reference to the locality.

In 1950 a third nursery was started in the Balia Agricultural Farm at Balasore to supply 5,000 seedlings annually to the growers of that district. In 1952 all these three coconut nurseries at Puri, Cuttack and Balia were brought under one scheme called the "Comprehensive Coconut Nursery Scheme, Orissa". In the next year the Research Station at Sakhigopal was closed. The area was made into a general agricultural farm for growing paddy and other agricultural crops.

It was really for the first time in the year 1954 that planning on proper lines for the improvement of coconut in Orissa was made. This year may be called as "D year" for coconut in Orissa and the pioneering and practical administrator who can never be forgotten in the history of coconut improvement of Orissa is Sri B. S. Mahanti, I. A. S., the then Secretary of the Development Department, Orissa. It was he who was primarily responsible for focussing the attention of the State Government and the administration in Orissa on the importance of coconut in the rural economy of the people of the State and the urgent need to take positive steps to improve the crop in the Second Five-Year Plan. The Director, Central Coconut Research Station, Kasargod and the Secretary, Indian Central Coconut Committee, Ernakulam were invited. There was a top level conference at the Orissa Secretariat in August, 1954. The members who participated were Shri B. S. Mahanti, I. A. S., Secretary, Development Department, Shri V. S. Tilak, I. A. S., Director of Agriculture & Food Production, Orissa, Shri D. P. Das, O. A. S., Under Secretary, Development

Department, Shri S. S. S. Venkatarao, Agricultural Research Officer, Sambalpur on the State side and Sri C. M. John, Director, Central Coconut Research Station, Kasaragod and Shri K. Gopalan, Secretary, Indian Central Coconut Committee on the Indian Central Coconut Committee side. In the review that was made in the conference, it was clear that more than 30,000 quality seedlings were awaiting disposal from the three nurseries at Puri, Cuttack and Balia. It meant that for the next two years there was obviously no necessity of any procurement of seednuts at all and the disposal of the seedlings was the only work. Why then and what for and how best could there be any plan on coconut under these conditions in this State? Are we to believe that having such vast areas and immense possibilities for successful cultivation of the coconut palm in the State, we should take no efforts as the seedlings are not being sold? Are we to believe that cultivators have no aptitude for raising the coconut palm? If we reconcile to these, how can we establish industries associated with the palm products such as oil pressing, coir manufacture, desiccated coconut etc. in future years with a small acreage and meagre production of coconuts in the State? The handicaps for such a situation were discussed. It was decided to set up one Research and Development Organisation directly under the Director of Agriculture and Food Production, Orissa and having a fullfledged Class II Officer as the head of the organisation. The nurseries which were under the District Agricultural Officers and the Deputy Director of Agriculture, Cuttack should be taken away from them and placed under the Coconut Research and Development Officer. A special nursery to supply 3,000 three-year old coconut seedlings annually to meet the local demand for older seedlings may be started at the fresh site selected for the new Regional Coconut Research Station at Sakhigopal. Another nursery may be started at Chatrapur to supply 5,000 quality one-year old seedlings annually to the growers in the District of Ganjam. Efforts should be made by means of propaganda and practical demonstration on the cultural and manurial aspects of coconut and its scientific method of cultivation. The Research Station at Sakhigopal should be started on a new site and the scheme prepared on correct lines suiting the conditions of the site and requirements of the locality with respect to this crop.

The experts of the Indian Central Coconut Committee visited the site selected for the new Regional Coconut Research Station and approved the same in August, 1954. Research and Development Schemes on coconut were formulated and placed before the State Government and the Indian Central Coconut Committee which met for its annual session at Puri in September 1954. The Schemes were approved. The organisation started functioning on 11th January, 1955 with the joining of Sri S. S. S. Venkatarao as the Coconut Research and Development Officer, Orissa at Sankhigopal. During the Second Five-Year Plan the Research and Development Scheme aimed at the acquisition and clearance of sites, layout of roads, drains etc., fencing, construction of quarters and buildings, germination and growth studies, supply of 23,000

quality seedlings annually, organisation of twenty four two-acre of 140 trees demonstration plots in cultivators' bearing coconut orchards and supply of manures and fertilisers to owners of coconut gardens to the limit of 7,000 palms annually at 50% subsidised rates. In the years 1957 and in the first half of 1958, there was severe drought and the manurial problem could not be started. Great efforts were made to save the seedlings in the nurseries from perishing. There was scarcity of seednuts as a result in 1959, and the price of coconut was abnormally high in 1959, and a part of 1960. In spite of these natural calamities, there was a demand for coconut seedlings in the villages. The District Agricultural Officers, the Block Development Officers and the Collectors in the coastal districts played a good role and due to a co-operative effort of all these and the special staff for coconut improvement in the Department of Agriculture, the demand for coconut seedlings abonormally increased and in the last year of the Second Five-Year Plan the annual supply of coconut seedlings in Orissa had to be increased from 23,000 to one lakh.

In December, 1960, the Technical Expert Sub-Committee of the Indian Central Coconut Committee consisting of Sri C. M. John, Vice-President of the Indian Central Arecanut Committee and member of the Indian Central Coconut Committee, Dr. K. P. V. Menon, Director, Central Coconut Research Station, Kayangulam and Dr. K. M. Pandalai visited the Regional Coconut Research Station at Sakhigopal in Orissa in connection with the scrutiny of the technical programme of work there as it was found too heavy and suggested modifications thereto as desired by the Indian Central Coconut Committee at its annual meeting held early that year. Their presence in Orissa was taken advantage of and the State's Third Five-Year Plan on coconut was finalised. It mainly attempts at the improvement of the Regional Coconut Research Station, establishment of twelve more coconut nurseries in the State with a phased programme of supply of quality coconut seedlings so that a four lakh annual supply target is reached by the end of the Third Plan period, plant about 100 acres in these nurseries with quality seedlings for future procurement of quality seednuts from them, organisation of 500 half-acre or 36 trees Demonstration plots in cultivators' growing coconut orchards, supply of manures and fertilisers at 50% subsidised rates to reach the target of 32,000 trees in the fifth year of the Third Five-Year Plan and touring the blocks intensively for tackling the problems of the growers on this crop by offering advice etc. On the research side the data collected on germination of seednuts and growth of seedlings in a number of years will be analysed and results interpreted for the benefit of the growers. The Research Station will be planted with quality seedlings for the different Experiments suggested by the Expert Sub-Committee. Other items like fencing, roads, electrification etc. will also be done during the Third Five-Year Plan period.

In the recent annual Zonal Conferences on the Community Development Programme in the State held in April-May, 1962 it was noticed

(*Continued on page 261*)

KERALA

November

In loamy soils, level up the mounds or give a second ploughing. Bury husk if you have the facility.

Give a second digging or ploughing in the laterite soil, which you don't irrigate. Dig or plough the soil and break clods in alluvial soils.

December

Irrigate in loamy soils, and also in laterite ones if you have the facility. Sow summer vegetables in the latter. Cart in clay for sandy soil. In coarse sands, apply a leaf mulch round the base of the tree. In alluvial soils, cart in and apply sand.

MYSORE

November - December

Plough the garden once or twice and bring the soil to a fine tilth.

Improvements are possible if you can maintain soil moisture. Where rainfall is sufficient or irrigation is possible or there is a high water - table take to improved practices.

Use any of these manure mixtures:

		in lb.
1.	Cattle manure or compost	100
	Wood ash	20–40
2.	Fish guano	15
	Muriate of potash	2–3
3.	Prawn dust	15
	Muriate of potash	2–3
4.	Groundnut oil cake	15–29
	Wood ash	20–40
	Superphosphate	2–3

For sandy soils, better avoid giving only chemical fertilizers. Apply the manure in basins round the base of trees. If possible apply in two doses, once in August-September and again in November-December.

MADRAS

November

Work the cultivator to remove weeds and create soil mulch.

For transplanting winter vegetables, plough the land and apply cattle manure @ 2000 lb. per acre. Plant the seedlings in rows in furrow giving a spacing

of 19 inches. About 10 days after transplanting, earth up the plants and manure with green leaf and cattle manure @ 2000 lb. per acre. For tomato, apply 100 lb. of superphosphate per acre.

December

Work the cultivator to remove weeds and create soil mulch.

MAHARASHTRA

November

Weed the garden; clean water channels.

December

Plant a crop of yam this month. Dig pits two and a half feet in diameter and six inches deep spaced four inches apart for this purpose. Before planting, fill the pits with rubbish and burn.

ANDHRA PRADESH

November - December

In loamy soil, plough the garden for the second time in November-December.

For sandy soils, better avoid giving only chemical fertilizers. If possible, apply in two doses, once in August-September and now in November-December any of the undermentioned manure mixtures:

	in lb.
1. Cattle manure or compost	100
Wood ash	20–40
2. Fish guano	15
Muriate of potash	2–3
3. Prawn dust	15
Muriate of potash	2–3
4. Groundnut oil cake	15–29
Wood ash	20–40
Superphosphate	2–3

ORISSA

November

In low-lying areas dig or plough the land to conserve moisture. Remove weeds and grass plants and burn them. Transplant winter vegetables.

December

Level down the soil mounds in the low-lying areas. Where facilities exist, irrigate the palms.

WEST BENGAL

November - December

Irrigate the palms and also remove the weeds whenever found necessary.

Question: Is charcoal a manure? Is there any means of preventing the fronds of coconut palms withering and falling off in the hot season? How can trouble from rats be avoided?

Answer: Neither charcoal nor charcoal powder has any manurial value. The aspect of manuring coconut palms has been dealt with in the Hand book on Coconut Cultivation which is available at Rs. 2.00 per copy (90 nP for postage) from the Office of the Secretary, Indian Central Coconut Committee, Ernakulam. The manures mentioned therein and suited to your tract may be used.

Premature shedding of leaves may be due to drought or some disease. Spraying with Bordeaux mixture (one per cent) may be tried. This will also protect the buds from rotting. For controlling rats, poison baits with zinc phosphide (poison) may be tried on the crowns of trees. Prebaiting may be carried out until the rats are accustomed to take the bait. The poison (zinc phosphide) may then be introduced into the bait. Zinc phosphide is a DANGEROUS POISON and therefore the bait should not be accessible to livestock, poultry or human beings. You may also consult the local Agricultural Demonstrator on the matter.

Question: I have a coconut garden about 2 acres in extent. The palms are planted in them 12 feet apart and they are now about 15 years old. But I do not get from my 500 trees more than 2000 nuts per annum. The average yield is only about 4 nuts per tree per annum. I am

applying to the palms plenty of cattle manure and ashes and prawn dust at the rate of 5 lb. per tree. Except for a row of palms that stand near the road-side and those near my house all the rest are found to be poor yielders. Some say that this is because the seedlings, originally planted were of bad quality, while others say that it is due to too much manuring. Can you tell me the real reason?

Answer: If coconut palms are planted too close to each other, they will yield well, however much we may manure them. They must have sufficient space and light to grow up and for their leaves to spread out. Coconut palms that stand on garden boundaries adjoining roads and near our homes yield well because they get plenty of light. We know by experience that plantain trees when they stand too close to one another, grow tall in search of light and give poor yields. In fact, no trees will yield well if planted too close to one another. The rows of properly spaced palms resemble unfurled umbrellas. Rows of palms in a crowded garden are like broomsticks.

To solve this problem, a summary step is necessary. Such of the trees as are too bad and do not even put forth inflorescences, should be cut and removed so that the remaining ones may get sufficient space and light. If the number of trees is reduced to 25 per cent the yield will increase more than four-fold. Moreover, only half the present quantity of manures need then be applied to the trees.

There are innumerable crowded coconut gardens in Travancore-Cochin, Malabar and Tanjore District. If they are properly thinned down, their yield will go up considerably. Those who are reluctant to cut and remove their palms, could arrange to uproot them and transplant in vacant sites with proper spacing. Transplanting young palms during the South-West monsoon is a common feature in Travancore-Cochin. There are skilled workers who do this and the cost would work out to Rs. 10 to Rs. 15 per palm. 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.

Question: Leaf disease is prevalent in our locality on a large scale. Though the affected trees were sprayed two or three times no substantial improvement is noticed. What is to be done now? Should the leaves of the affected trees be cut and removed before the palms are sprayed?

Answer: Spraying of coconut trees against the leaf disease with copper fungicides should be done as a routine practice every year in coconut plantations. It is only by continuous application of the spray to the leaves (three times per year) that the disease can be brougt under control in course of time. You cannot expect a disease that has

established itself in a locality to disappear if a few coconut growers spray their trees twice or thrice. Along with spraying, manuring and cultivation have also to be done.

It is not necessary to cut off all the leaves of infected trees. Only the rotten portions of the leaves may be clipped off and burnt.

Plans for coconut improvement..... *(Continued from page 256)*

that the demand for quality coconut seedlings is increasing more and more and the growers need more practical advice from the technical personnel. There is an urgent need to set up more coconut nurseries in the blocks in the districts of Cuttack, Puri and Balasore this year. The nursery staff should be entrusted with the task of arranging the packing and transport of seedlings to various blocks, provided the block authorities send 50% of the cost of seedlings and full packing and transport charges including the railway freight. The administrative control of the nurseries is passed on to the District Agricultural Officers. These efforts it is presumed will increase the coconut production in the State from 31.90 million nuts achieved in the II Five-Year Plan period to 40.70 million nuts in the III Five-Year Plan period.

Planting coconut seedlings

It is of little profit to select a good variety of coconut for planting if you do not give some thought to the planting too. For, a properly planted palm will live some 80 years and yield for three-fourths of its life.

Planting is as important as the selection of seedlings. Depth of planting, distance of planting, method of planting and after-care are the main factors to be considered in planting.

Advantages of deep planting

Deep planting is better in areas where the water-table is not high. The pit may be one metre deep. Deep planting has the following advantages.

When the seedling grows up, the entire bole will be inside the soil.

As the roots emanate from the bole, a deep planted tree will have a matwork of many roots.

The large number of roots means strong anchorage and the tree will not be a prey to strong winds or cyclones.

Large number of roots means better absorption of manure and moisture, which in turn means better growth and high productivity.

The tree will be able to withstand drought better.

Spacing is also very important. The distance between plants may be eight or nine metres. This ensures that the trees will have enough sunlight and will grow upright and bear heavily. In crowded plantations, the trees tend to be unhealthy and yield poor. Sixty trees per acre is the optimum number.

Method of planting

The pits should be prepared sufficiently early. Surface soil and half a kilogram of coconut fertiliser mixture may be thoroughly mixed and put in the pit and the seedling planted. The

planting may be made at the commencement of rains.

After-care

Small doses of manure may be given to seedlings at intervals of fifteen days. One-eighth kilogram of coconut mixture per seedling is enough for a single application.

— *Indian Farming*

Fish in paddy fields

Under a fish-development scheme, experiments were conducted at some selected places in the 24-paraganas in West Bengal to find out the possibility of rearing fish in paddy fields. When the fields were strengthened and a free supply of fry was arranged, it was found that *katla* had grown to a length of 5 to

(*Continued on page 265*)

WEATHER REVIEW

AUGUST 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	31.4°C	30.0°C	22.8°C	24.1°C	294.3	—32.1	19	153.6
Central Coconut Research Station, Kasaragod	31.3°C	28.3°C	18.3°C	19.4°C	850.0	+246.7	29	88.6

SEPTEMBER 1963

Central Coconut Research Station, Kayangulam	32.4°C	30.7°C	22.6°C	24.1°C	262.8	+14.9	15	221.3
Central Coconut Research Station, Kasaragod	31.5°C	30.0°C	18.6°C	21.5°C	212.4	—195.5	13	229.9

OCTOBER 1963

Central Coconut Research Station, Kayangulam	32.3°C	30.6°C	22.7°C	23.7°C	238.2	—8.2	12	219.5
Central Coconut Research Station, Kasaragod	33.3°C	30.7°C	21.7°C	23.6°C	444.0	+238.3	9	216.4

F. A. O. Regional Coconut Improvement Officer visits India

Mr. W.V.D. Pieris, F.A.O. Regional Agricultural Officer for Coconut Improvement visited India during the second half of November 1963. During his stay in india he visited the Committee's office and the Committee's Central Research Station at Kayangulam. Problems on coconut research and development were discussed with the Secretary of the committee, the Chief Development and Liaison Officer for coconut, arecanut, spices and cashewnut, and the Directors of the two Central Research Stations.

Re-designation of the post of "Coconut Specialist"

The head of the Central Coconut Research Station, Kasaragod who had recently been designated as "Coconut Specialist" has been redesignated as 'Director'.

Assistant Secretary for the Indian Central Coconut Committee

Government of India have sanctioned the post of one Assistant Secretary for the Indian Central Coconut Committee and have appointed Shri P. S. Ponratnam, a Section Officer of the Ministry of Food and Agriculture (Department of Agriculture) to the post. Shri Ponratnam assumed charge on 23rd November, 1963.

Criollo cocoa from South Indian States likely to have international market

The Criollo variety of cocoa grown in the South Indian States of Madras, Kerala, Mysore etc. and which has possibilities of considerable expansion in these states, is reported to find considerably large demand in the International markets and is likely to fetch a premium price over other varieties, says a note received from the Indian Council of Agricultural Research. In order to ascertain the demand of Criollo variety of cocoa *vis-a-vis* Forestero variety in the International market, samples of cured Criollo beans from Madras were sent to some chocalate manufacturing firms in Switzerland and Belgium for their commercial evaluation.

An extremely important feature of this variety, according to reports

received from these firms, is the pronouncedly light break of about 90 per cent of the beans. No other *Cocoa* except perhaps the Cocoas from the Comores Island (near Madagascar) and Samoa Island which enjoy a premium over other varieties, have such a light break. This variety has a very agreeable flavour and equally appealing light colour also.

Coconut trees treated with nadeswaram music

Forty coconut trees are made to "listen" to a beaming traditional melody in nadaswaram for the last six days at Nanjundapuram, a village of temples and coconut trees five miles from Coimbatore says a report in the Sunday Standard.

The report continues that for full one hour in the morning the recorded nadaswaram music rendered by the famous nadaswara vidwan late Rajarathnam Pillai in *Charukesi Raga* is being broadcast through a loudspeaker in the coconut gardens.

Will those trees respond to the music and give more sweet neera? The answer to the question may be available in the next four or five months.

The new experiment has been launched under the auspices of the Central Coconut Palmgur Pilot Model Demonstration Station, Nanjundapuram. The experiment is being conducted by Mr. T. S. N. Singh, Palm Agronomist attached to the Pilot Station.

Sixty-year-old Cambridge-educated Mr. Singh, is the brother of Dr. T.C.N. Singh, Head of the Department of Botany, Annamalai University who has conducted pioneering experiments on effect of music on a wide variety of plants.

Mr. Singh is quite optimistic of success of the attempt. A similar experiment of musical stimulation of growth of date palm seedling conducted by him at the Central Research Station at Dahanu had produced very good results. It was Bismillah Khan's shenai that was played repeatedly to stimulate growth of these seedlings.

Gleanings from other Journals

... (*Continued from page 263*)

8.3 inches, *rohu* 3 to 7 inches and *mrigal* 3 to 5 inches.

Experiments carried out in Bihar have shown that an average yield of 90 kg. of fish per acre can easily be obtained. There was a slight increase in the yield of paddy too.

In many parts of the country the wild fish that enter the paddy fields along with flood or irrigation water are sometimes stocked in the fields. Generally a catch of about 3 kg. per hectare can be obtained. Under favourable conditions such a catch may go up to 200 kg. per hectare.

In Kerala fish are cultured as a secondary crop. Prawns and brackish-water fish are raised in paddy fields alternately.

— *Rice News Teller*

Market Surveys

Foreign Markets

General Trend

The "Oil World" of Hamburg dated 26th September 1963, observes that since the big Russian wheat purchases, the bullish factors obviously have dominated the world markets for oil seeds, oils and fats also both psychologically and factually. Without doubt the psychological factor has been allowed to run riot since September 16th and the bulk of the price rises registered since that date certainly have been on account of it. This is explained by its nature. Markct sentiment is highly contagious, tending to swell like an epidemic, particularly if the East bloc is involved. The news coming from that part of the world or released about it is not only very scanty but for many, also difficult to check.

The "Oil World" further adds that even if we leave the psychological factor out of consideration there will still remain sufficient facts to justify a good deal of the price rise. The current Russian sun flower seed crop probably reached only 4.2 million M. T. i. e. 6,00,000 Tonne or on an oil basis 2,15,000 T less than last year. Though this decline is partly offset by the expected increase in the output of animal fats and partly by some reduction of stocks, the Russian net exports of oil seeds, oils and fats are expected to decline by 1,50,000 M. T. oil basis in the calendar year 1964.

CEYLON

COPRA

September. 1963

During the month of septembr 1963, the undertone of the Colombo copra market became weak and the prices displayed a declining trend during the first two weeks but in the second half of the month the market improved and the prices presented an upward trend.

On the 7th and 14th September, 1963 copra Estate No. I was quoted at Rs. 154.50 per candy (560 lb.) which advanced to Rs. 158.50 on the 21st and Rs. 158.75 on the 28th September 1963.

The market more or less presented a similar trend in prices in the case of milling copra also. On the 7th and 14th September 1963 a candy of milling copra was quoted at Rs. 152.00, which slightly advanced to Rs. 156 on the 21st and Rs. 156.25 on the 28th September, 1963.

October,1963

In the month of October, 1963, the Colombo copra market displayed a rising trend in prices during the first three weeks but in the last week the prices presented a declining trend.

On the 5th October, 1963, copra Estate No. I was quoted at Rs. 163.50 per candy of (560 lb.) which steadily rose to Rs. 169.50 on the 12th and Rs. 170.50 on the 19th. But in the last week of the month, when the market closed on the 26th, a candy of oil was priced at Rs. 161.50.

The market witnessed a similar trend in prices in the case of milling copra also. On the 5th Ootobr, 1963 prices quoted for a candy of milling copra was Rs. 161.00 which advanced to Rs. 167.00 and Rs. 168.00 on the 12th and the 19th and the market closed on the 26th at Rs. 161.50 per candy.

COCONUT OIL

Septembr, 1963

The Colombo coconut market during the month of September 1963 displayed a decling trend compared to the second half of August, 1963. On the 7th September 1963, a ton of coconut oil was quoted at Rs. 1100.00 which lowered to Rs. 1080.0 on the 14th and Rs. 1060.00 on the 21st. When the market closed on the 28th September, 1963, the price quoted for a ton of oil was Rs. 1075.00

October, 1963

The coconut oil market at Colombo during the month of October 1963, presented an advancing trend in prices in the first three weeks compared to the previous month, but towards the last week of the month, the prices declined in sympathy with the copra market. On the 5th October, 1963, price quoted for a ton of oil was Rs. 1105.00 which advanced to Rs. 1110.00 on the 12th and remained at the same level on the 19th also. But by the 26th, the price declined to Rs. 1075.00.

SINGAPORE

COPRA

September, 1963

In the first half of September 1963 the undertone of the Singapore copra market slightly improved from the previous months level and by the third week, the price of F. o. b. copra further improved because of the uncertainty of future imports following the political situation. But in the last week of the month following the break of trade relations between Indonesia and Malaysia the copra market was at a standstill and the price of copra was not quoted on the 27th September, 1963.

Price per picul (133⅓ lb) F. o. b. copra fair mixed at Singapore on the 6th and 13th was M$ 31.00 which advanced to M$ 32.00 on the 20th September 1963.

October, 1963

During the month of October 1963 owing to the ban enforced by the Malaysian Government on the export of copra there was no transaction in the copra market and hence F. o. b. prices were not quoted.

COCONUT OIL

September, 1963

During the month of September 1963, the coconut oil market at Singapore remained more or less steady with slight fluctuations on account of the tense political situation created by the formation of Malaysia and severance of trade relations between Malaysia and Indonesia.

The price quoted for a picul (133⅓ lb.) of drum oil on the 6th September 1963 was M$ 48.25 which slightly declined to M$ 47.75 on the 13th. But on the 20th, the price quoted for a picul of oil was M$ 48.00. As the market remained at a standstill, the price was not quoted on the 27th September 1963.

October, 1963

During the month of October, 1963, due to the ban enforced on the export

of coconut oil, the market became lifeless and price was not quoted for the first three weeks. But towards the last week, with the announcement by the Controller of Imports and Exports that coconut oil was allowed export on quota basis, transactions in drum oil took place at a slow pace and a picul (133⅓ lb.) of drum oil was quoted at M$ 52.75 on the 25th October 1963.

Indian Markets

COCHIN

September 16th to November 15th, 1963

When the Cochin coconut oil market opened on the 16th September a quintal of ready oil was quoted at Rs. 287.50. During the second half of September 1963 the ready coconut oil market remained more or less steady with very little fluctuation as there was not much demand for oil from up-country markets. On the 18th a quintal of oil was priced at Rs. 286.00 which slightly improved to Rs. 288.50 on the 19th and closed on the 20th at Rs. 288.00. When the market opened on the 23rd a quintal of oil was valued at Rs. 285.00 but the price slightly fluctuated and was quoted at Rs. 287.00 on the 24th and Rs. 286.50 on the next day. The market remained closed from 26th to 29th due to Pooja holidays and Sunday and when the market closed on the 30th September price quoted for a quintal of oil was Rs. 283.00.

When the market opened on 1st October 1963, a quintal of oil was quoted at Rs. 285.00. As there was selling pressure from millers the market became bearish and displayed an easy undertone in the ready oil market during the first week. On the 3rd, a quintal of oil was priced at Rs. 281.00 and the market closed on the 3rd at Rs. 283.50. Though the market opened on a slightly bullish trend on the 7th, due to adequate supply of coconut oil in the market to meet the demand, the prices tended to decline in the second week of October. The price quoted for a quintal of oil on the 9th and 10th were Rs. 283.00 which gradually declined to Rs. 282.00 on the 12th, Rs. 280.50 on the 14th and the market closed on the 15th October at Rs. 280.00 per quintal.

As the market remained closed on the 16th and 17th, it opened on the 18th at Rs. 279.00 per quintal. During the second half of October due to the restrictions imposed on railway bookings beyond waltair exporters could not book coconut oil to North Indian markets and hence the price slightly declined from the 1st half of the month and remained more or less steady with slight fluctuations. On the 22nd a quintal of oil was quoted at Rs. 279.50, which slightly improved to Rs. 280.50 on the 25th and 26th. But again it slightly lowered to Rs. 280.00 on the 28th and 29th and the market closed on the 31st at Rs. 284.00 with an optimistic note.

When the market opened on the 1st November 1963, a quintal of ready oil was quoted at Rs. 287.00. The coconut oil market during the 1st half of November witnessed a buoyant trend as there was persistent demand for oil from Assam, Bihar and Bengal. As the restriction imposed on railway booking had since been lifted and as there was considerable demand for oil from upcountry markets also the prices improved steadily. On the 5th a quintal of oil was priced at Rs. 289.50 which

advanced to Rs. 292.00 on the 6th and Rs. 292.25 on the 7th. The prices fluctuated around Rs. 292.00 and Rs. 290.00 from the 8th to 12th November. But from the 13th onwards the price displayed a slightly declining trend and was quoted at Rs. 287.00 on the 13th and the market closed on the 15th at Rs. 286.00.

ALLEPPEY

September 16th to November 15th, 1963

When the Alleppey coconut oil market opened on the 16th September a quintal of oil was quoted at Rs. 287.00. In the second half of September 1963, the ready oil prices generally looked down as demand was not heavy. Even the forward market was weak and listless. On the 17th and 18th the price for ready oil for a quintal remained at Rs. 387.00, but it slightly declined to Rs. 285.00 on the 19th and remained at the same level till 26th except on the 24th when it was quoted at Rs. 284.00. The market remained closed from 27th to 29th due to Pooja holidays and when the market opened on the 30th, the price further declined to Rs. 283.00 per quintal.

The market opened on the 1st October at Rs. 283.00. The ready oil market during the 1st half of October presented a recessionary trend with occasional rise in price as demand for ready oil from Bombay and other parts was not encouraging. On the 3rd and 4th, the price for a quintal of oil remained at Rs. 281.00 and closed on the 5th at Rs. 283.00, But when the market opened on the 7th, the price improved and was quoted at Rs. 285.00. On the 9th it again declined to Rs. 282.00 and Rs. 280.00 on the 12th and the market closed on the 15th at Rs. 277.00.

16th being holiday, the market opened on the 17th at Rs. 280 per quintal. In the third week of the month, the undertone of the market remained easy due to lack of buying support, but towards the month end the prices looked up due to the thin inflow of copra in the market and the sustained demand for oil from North Indian markets. On the 18th a quintal of oil was priced at Rs. 278.00 which slightly improved to Rs. 279.00 on the 21st and 22nd and from the 24th to the 30th the price fluctuated around Rs. 280.00 and Rs. 282.00 per quintal and the market closed on the 31st at Rs. 283.00.

When the Alleppey market opened on the 1st November 1963, a quintal of oil was quoted at Rs. 284.00. Due to persistent demand for oil from North Indian markets for Deepavali season, the lifting of the booking restrictions imposed by the railway authorities during the preceding weeks and also on account of the continued thin arrivals of copra, the market witnessed a bullish trend and the prices steadily advanced till the 8th November. On the 4th a quintal of oil was quoted at Rs. 287.00 which steadily advanced to Rs. 290.00, Rs. 291.00 and Rs. 293.00 on the 6th, 7th and 8th November respectively and the market closed for the week end on the 9th at Rs. 292.00 per quintal.

The market opened on the 11th at Rs. 291.00. As demand for oil for the Deepavali season was on the ebb, the price of oil displayed a steady declining trend during the next few days. On the 12th price valued for a quintal of oil was Rs. 290.00 which steadily lowered to Rs. 289.00 on the 14th and the market closed on the 15th at Rs. 288.00 per quintal.

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 September, 1963 to 15th November, 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 - 9 - 63	215 00	N.R.	225 00	196 12	203 00	204 75	287 50	287 00	293 00	57 00	53 50	55 00
17 - 9 - 63	215 00	N.R.	225 00	194 60	207 00	205 00	286 50	287 00	296 00	54 00	53 50	55 00
18 - 9 - 63	215 00	260 00	225 00	194 20	205 00	205 00	286 00	287 00	296 00	54 00	54 00	55 00
19 - 9 - 63	215 00	N.R.	227 50	195 85	202 00	200 00	288 50	285 00	291 50	54 00	53 50	55 00
20 - 9 - 63	215 00	N.R.	227 50	195 54	N.R.	197 00	288 00	N.R.	285 00	54 00	N.R.	53 50
21 - 9 - 63	N.R.	260 00	227 50	N.R.	202 00	200 00	N.R.	285 00	296 00	N.R.	54 00	55 00
22 - 9 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
23 - 9 - 63	210 00	N.R.	220 00	193 67	202 00	200 00	285 00	285 00	296 00	54 00	53 50	55 00
24 - 9 - 63	210 00	N.R.	220 00	194 57	202 00	189 50	287 00	284 00	296 00	53 00	53 50	52 00
25 - 9 - 63	210 00	260 00	220 00	194 25	202 00	189 90	286 50	285 00	292 00	53 00	53 50	52 00
26 - 9 - 63	N.R.	N.R.	225 00	N.R.	202 00	195 00	N.R.	285 00	293 00	N.R.	53 50	52 00
27 - 9 - 63	P	O	O	J	A	H	O	L	I	D	A	Y

28 - 9 - 63	P	O	O	J	A	H	O	L	I	D	A	Y
29 - 9 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
30 - 9 - 63	215 00	N.R.	225 00	192 00	200 00	193 00	283 00	283 00	292 00	53 00	52 00	51 50
1 - 10 - 63	210 00	N.R.	N.R.	192 00	200 00	N.R.	285 00	283 00	N.R.	53 00	52 00	N.R.
2 - 10 - 63	N.R.	N.R.	225 00	N.R.	N.R.	193 00	N.R.	N.R.	292 00	N.R.	N.R.	51 50
3 - 10 - 63	210 00	N.R.	225 00	191 00	198 00	193 00	281 00	281 00	292 00	53 50	50 00	51 50
4 - 10 - 63	225 00	N.R.	225 00	191 00	198 00	192 00	282 00	281 00	292 00	52 00	56 00	51 50
5 - 10 - 63	225 00	270 00	225 00	192 55	200 00	192 00	283 50	283 00	292 00	53 50	50 50	51 50
6 - 10 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
7 - 10 - 63	225 00	N.R.	225 00	192 97	200 00	192 00	285 00	285 00	292 00	52 00	50 50	51 50
8 - 10 - 63	225 00	N.R.	225 00	192 97	200 00	192 00	285 00	285 00	292 00	52 00	51 00	51 50
9 - 10 - 63	225 00	270 00	217 50	191 71	200 00	192 00	283 00	282 00	292 00	52 00	51 00	51 50
10 - 10 - 63	215 00	N.R.	227 50	191 00	200 00	192 00	283 00	283 00	295 00	51 00	51 50	52 00
11 - 10 - 63	215 00	N.R.	227 50	190 74	205 00	192 00	282 00	282 00	293 00	51 00	51 50	52 00
12 - 10 - 63	225 00	270 00	227 50	189 50	203 00	192 00	280 00	280 00	293 00	51 00	51 00	52 00
13 - 10 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
14 - 10 - 63	215 00	N.R.	220 00	187 89	200 00	192 00	280 50	277 00	293 00	50 00	51 00	52 00
15 - 10 - 63	225 00	N.R.	220 00	189 00	200 00	189 00	280 00	277 00	292 50	50 00	51 00	51 00

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 - 10 - 63		Deepa	vali		Holi	day		Deepa	vali		Holi	day
17 - 10 - 63	N.R.	N.R.	N.R.	N.R.	200 00	N.R.	N.R.	280 00	N.R.	N.R.	51 00	N.R.
18 - 10 - 63	215 00	N.R.	220 00	188 52	202 00	191 00	279 00	278 00	292 50	50 00	51 00	51 00
19 - 10 - 63	215 00	270 00	N.R.	188 36	N.R.	N.R.	278 75	N.R.	N.R.	50 00	N.R.	N.R.
20 - 10 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y
21 - 10 - 63	225 00	N.R.	215 00	198 00	200 00	189 50	278 75	279 00	292 00	50 00	51 00	50 50
22 - 10 - 63	225 00	N.R.	215 00	188 52	200 00	190 00	279 00	279 00	292 00	50 00	51 00	50 50
23 - 10 - 63	225 00	280 00	215 00	188 30	202 00	190 00	279 50	280 00	292 00	50 00	51 00	50 50
24 - 10 - 63	225 00	N.R.	215 00	190 00	202 00	191 50	281 00	282 00	292 00	50 50	51 00	50 50
25 - 10 - 63	230 00	N.R.	215 00	190 00	202 00	191 50	280 50	281 00	292 00	50 50	51 00	50 50
26 - 10 - 63	230 00	280 00	215 00	189 00	203 00	191 50	280 50	281 00	292 00	51 00	52 50	50 50
27 - 10 - 63	S	U	N	D	A	Y	S	U	N	D	A	Y

28 - 10 - 63	230	00	N.R.		215	00	190	00	200	00	192	50	280	00	280	00	292	50	52	00	54	00	50	50
29 - 10 - 63	230	00	N.R.		215	00	190	00	201	00	193	50	280	00	280	00	292	50	52	50	54	00	50	50
30 - 10 - 63	235	00	280	00	217	50	190	82	202	00	193	50	281	00	281	00	292	50	53	00	54	00	50	50
31 - 10 - 63	235	00	N.R.		217	50	193	00	203	00	193	50	284	00	283	00	292	50	54	00	55	00	50	50
1 - 11 - 63	235	00	N.R.		217	50	194	92	203	00	195	00	287	00	284	00	292	00	54	00	56	00	50	50
2 - 11 - 63	235	00	280	00	217	50	196	14	N.R.		195	00	290	00	N.R.		293	50	55	00	N.R.		50	50
3 - 11 - 63	S		U		N		D		A		Y		S		U		N		D		A		Y	
4 - 11 - 63	235	00	N.R.		217	50	196	91	205	00	200	00	288	50	287	00	293	50	57	00	58	00	58	00
5 - 11 - 63	235	00	N.R.		217	50	198	58	205	00	200	00	289	50	288	00	293	50	60	00	60	00	58	00
6 - 11 - 63	235	00	280	00	215	00	200	14	207	00	200	00	292	00	290	00	293	50	60	00	60	00	58	00
7 - 11 - 63	235	00	N.R.		215	00	200	30	207	00	200	00	292	25	291	00	300	00	60	00	58	00	58	00
8 - 11 - 63	235	00	N.R.		215	00	200	14	208	00	200	00	292	00	293	00	300	00	60	00	58	00	58	00
9 - 11 - 63	235	00	N.R.		215	00	199	17	207	00	200	00	291	00	292	00	302	00	59	00	58	00	58	00
10 - 11 - 63	S		U		N		D		A		Y		S		U		N		D		A		Y	
11 - 11 - 63	235	00	N.R.		215	00	199	47	207	00	200	00	291	50	291	00	300	50	59	00	59	00	58	00
12 - 11 - 63	235	00	N.R.		215	00	198	54	207	00	200	00	290	00	290	00	302	00	59	00	58	00	58	00
13 - 11 - 63	235	00	280	00	215	00	196	32	210	00	200	00	287	00	290	00	302	00	58	00	58	00	58	00
14 - 11 - 63	235	00	N.R.		215	00	195	70	205	00	197	50	286	00	289	00	299	50	58	00	57	00	57	00
15 - 11 - 63	235	00	N.R.		217	50	195	70	203	00	197	00	286	00	288	00	300	00	58	00	57	00	57	00

Source: (1) **Cochin:** Indian Chamber of Commerce, Cochin. (2) **Alleppey:** The Malayala 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 September, 1963

Commodity - Markets	Carry over	Arrivals	Sales	Balance
Coconuts (in thousands)				
Kozhikode	235	3,600	3,385	450
Badagara	445	1,150	1,300	295
Ponnani	N O		R E P	O R T
Tellicherry and Dharmadam	23	1,100	1,045	78
Tirur	77	101	113	65
Cannanore	15	98	100	13
Copra (in quintals)				
Kozhikode	610	6,000	6,450	160
Badagara	5,540	9,800	14,200	1,140
Cannanore	85	725	765	45

Weekly prices of coconut and copra in some of the Malabar markets during the month of September, 1963

Commodity - Markets	1st week Rs. nP.	2nd week Rs. nP.	3rd week Rs. nP.	4th week Rs. nP.
Coconuts (husked for 1000)				
Badagara	220.00	225.00	230.00	225.00
Ponnani	N O	R E	P O	R T
Tellicherry and Dharmadam	180.00	193.00	193.00	200.00
Tirur	220.00	210.00	230.00	215.00
Cannanore	225.00	230.00	2 2 00	230.00
Copra at Badagara Market (per quintal)				
Office pass	190.00	183.00	180.00	175.00
Edible Copra				
Madras	N O	TRAN	SACT	ION
Dilpas	198.00	193.00	193.00	198.00
Rajpur	235.00	233.00	230.00	230.00

General **1. Coconut:** Arrivals decreased as coconuts were converted into copra due to favourable weather. Prices remained more or less steady.

2. Copra: Arrivals increased owing to favourable weather. Prices also advanced mildly.

Arrivals and iales of coconuts and copra in the different markets in Malabar during the month of October, 1963

Commodity - Markets	Carry over	Arrivals	Sales	Balance
Coconuts (in thousands)				
Kozhikode	450	3,900	3,890	460
Badagara	295	1,700	1,650	345
Ponnani	55	124	175	4
Tellicherry and Dharmadam	78	1,150	1,110	118
Tirur	65	175	162	78
Cannanore	13	95	94	14
Copra (in quintals)				
Kozhikode	160	7,400	7,500	60
Badagara	1,140	18,200	17,600	1,740
Cannanore	45	685	700	30

Weekly prices of coconut and copra in some of the Malabar markets during the month of October, 1963

Commodity - Markets	1st week Rs. nP.	2nd week Rs. nP.	3rd week Rs. nP.	4th week Rs. nP.
Coconuts (husked for 1000)				
Badagara	212.00	205.00	207.00	210.00
Ponnani	180.00	200.00	230.00	215.00
Tellicherry and Dharmadam	200.00	202.00	192.00	202.00
Tirur	190.00	193.00	198.00	198.00
Cannanore	202.00	206.00	211.00	212.00
Copra at Badagara market (per quintal)				
Office pass	177.00	180.00	185.00	180.00
Edible Copra				
Madras	205.00	207.00	202.00	205.00
Dilpas	198.00	195.00	197.00	197.00
Rajpur	227.00	227.00	227.00	227.00

General **I. Coconut :** Arrivals and despatches increased when compared to the previours month. Prices remained more or less steady.

2. Copra : Arrivals and despatches increased due to favourable weather and good demand. Prices remained steady.

III. Mysore

Statement showing the wholesale prices of coconut and its products as prevailed at key markets in the Mysore State during September and October 1963

Sl. No.	Market and Date	Coconuts per 1,000 nuts	Copra per quintal	Coconut oil
1. Tiptur				
	6-9-1963	240.00 — 263.00	212.00 — 216.50	...
	13-9-1963	240.00 — 269.50	213.00 — 217.00	...
	20-9-1963	232.00 — 260.00	214.00 — 219.00	...
	27-9-1963	226.00 — 262.00	213.00 — 215.00	...
	4-10-1963	240.00 — 275.00	211.00 — 213.00	...
	11-10-1963	242.00 — 275.00	215.00 — 221.00	...
	18-10-1963	235.00 — 275.00	213.00 — 217.50	...
	25-10-1963	240.00 — 275.00	214.00 — 215.00	...
2. Arsikere				
	6-9-1963	132.00 — 300.00	208.25 — 215.75	Nil
	13-9-1963	121.50 — 301.00	213.25 — 221.50	47.00 per 16 kg.
	20-9-1963	150.00 — 301.00	216.00 — 223.00	46.00 ,,
	27-9-1963	130.00 — 315.00	210.00 — 220.00	49.00 ,,
	4-10-1963	169.50 — 277.00	212.00 — 216.00	46.50 ,,
	11-10-1963	180.00 — 295.00	218.00 — 222.25	46.00 ,,
	18-10-1963	166.00 — 322.00	212.00 — 218.75	47.00 ,,
	25-10-1963	196 50 — 335.50	210.00 — 215.75	46.00 ,,
3. Mangalore				
	6-9-1963 I Sort	340.00 — 370.00	212.00 — 220.00	342.00 per quintal
	II ,,	200.00	...	328.00 ,,
	13-9-1963 I ,,	320.00 — 380.00	212.00 — 220.00	338.00 ,,
	II ,,	250.00	...	324.00 ,,
	20-9-1963 I ,,	250.00 — 375.00	180.00 — 205.00	No stock
	II ,,	...	...	320.00 ,,
	27-9-1963 I ,,	350.00 — 370.00	175.00 — 200.00	336.00 ,,
	II ,,	240.00	...	316.00 ,,
	4-10-1963 I ,,	360.00 — 380.00	175.00 — 195.00	336.00 ,,
	II ,,	... — ...	... — ...	316.00 ,,
	11-10-1963 I ,,	380.00 — 410.00	170.00 — 193.00	334.00 ,,
	II ,,	250.00	...	314.00 ,,
	18-10-1963 I ,,	300.00 — 412.50	178.00 — 190.00	332.00 ,,
	II ,,	...	...	312.00 ,,
	25-10-1963 I ,,	280.00 — 430.00	165.00 — 190.00	332.00 ,,
	II ,,	220.00 — 240.00	...	312.00 ,,

Review on the trend in the wholesale prices of coconut and its products as prevailed at some selected markets in the Mysore State during September and October 1963.

September 1963

Coconuts

Arsikere coconut market opened on 6th September 1963, with a decline of Rs. 18 and Rs. 51 in opening and closing prices respectively, as there was very poor demand from the outside markets. During the second week prices of coconuts moved down by Rs. 11 in the opening prices and the closing prices remained steady. An increase of Rs. 29 was noticed in the opening prices when the market opened on 20th September 1963, but no significant variations in the closing prices were observed. During the last week poor arrivals coupled with good demand forced the prices of coconuts to move up by Rs. 14 in the closing prices and they moved down by Rs. 20 in the opening prices.

Owing to depleted arrivals of coconuts during the 1st week Tiptur market gained Rs. 10 in the opening prices and they lost Rs. 6 in the closing prices. The minimum and maximum prices per 1000 nuts were Rs. 240 to Rs. 263 respectively. In the second week prices of coconuts advanced by Rs. 6 in the closing prices, however the opening prices remained unaffected. Though there were poor arrivals of coconuts during the 3rd week the prices of coconuts went down by Rs. 8 and Rs. 9 in the opening and closing prices respectively for want of demand. In the last week of the month they lost Rs. 6 in the opening prices and they gained Rs. 2 in the prices. The minimum and maximum prices were Rs. 226 and Rs. 262.

Mangalore market opened on 6th September 1963, the opening and closing prices being Rs. 340 and Rs. 370 (I quality) and Rs. 200 (II quality). Prices of coconuts in the second week fell by Rs. 20 in the opening prices and gained Rs. 10 in the closing prices as the demand was not good. During the third week increased arrivals as well as lack of sufficient demand for coconuts from the other markets forced its prices to move down by Rs. 70 in the opening prices and by Rs. 5 in the closing prices. The minimum and maximum prices were of the order of Rs. 250 and Rs. 375. A significant rise of Rs. 100 in the opening prices and a fall of Rs. 5 in the closing prices of coconuts were observed during the last week.

Copra

Copra market at Arsikere opened on 6th September 1963, minimum and maximum prices being Rs. 208.00 and 215.75. Prices fell by Rs. 5 and Rs. 6 in the opening and closing prices respectively, when compared with the prices of last week, and they advanced by the same amount during the second week (Rs. 5 and Rs. 6 respectively). In the third week, prices of copra gained Rs. 3 in the opening prices and Rs. 2 in the closing prices. Since the arrivals of copra to the market during the last week increased its prices went down by Rs. 6 in the opening prices; however the closing prices remained unaffected.

During the first week for want of demand at Tiptur market prices of copra fell by Rs. 6 and Rs. 8 in the opening and closing prices respectively, but they continued to rule more or less steady till

the end of the month. In the final week the prices were Rs. 213 (minimum) and Rs 215 (maximum).

Mangalore copra market opened on 6th September 1963, with a decline of Rs. 6 in the opening prices and Rs. 4 in the closing prices. No significant variations in the prices of copra were noticed during the second week. Owing to lack of demand its prices fell by Rs. 32 and Rs. 15 in the opening and closing prices respectively. They again fell by Rs. 5 in the last week. The minimum and maximum prices were Rs. 175 and Rs. 200 respectively.

COCONUT OIL

Arsikere market was steady during the month. At Mangalore prices of coconut oil fell by Rs. 4 (II quality) in the second, third and fourth weeks and they fell by the same amount for 1st quality during second week of the month. During the 1st week prices were as follows :-

1st quality	Rs. 342
2nd quality	Rs. 324

October 1963

COPRA

At Arsikere the opening and closing prices of copra during the first week advanced respectively by Rs. 2 and Rs. 4 and during the second week by Rs. 6. During the third week they fell by Rs. 6 and Rs. 4 respectively and in the last week a further decline of Rs. 2 and Rs. 3 were noted in the opening and closing prices.

Copra market at Tiptur opened on 4th October 1963 with the range of prices from Rs. 211.00 to Rs. 213.00. During the first week the opening as well as the closing prices decreased by Rs. 2 for want of demand. During the second week though there were increased arrivals of copra, the opening and closing prices shot up by Rs. 4 and Rs. 8 due to good demand. But during the third week the opening and closing prices registered a fall of Rs. 2 and Rs. 4 for want of demand. In the last week the market closed with a further decline of Rs. 2.

Mangalore copra market opened on 4th October 1963 with a decline of Rs. 5 from the price level of the previous week. Though the arrivals of copra were scanty the prices declined by Rs. 2 at the close. In the third week the opening prices showed an increase of Rs. 8 whereas the closing prices registered a fall of Rs. 3. Fresh arrivals of copra caused a decline of Rs. 13 in the opening prices but at the close of the month the loss was made up.

COCONUT OIL

During the first week the price of coconut oil at Arsikere market gained Rs. 3. During the rest of the month the prices ruled more or less steady.

At Mangalore the prices of coconut oil suffered a moderate fall of Rs. 4 per quintal in the course of the month.

IV. Colombo

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

Commodity	Unit	Week ending 7-9-63 Rs. cts.	Week ending 14-9-63 Rs. cts.	Week ending 21-9-63 Rs. cts.	Week ending 28-9-63 Rs. cts.
Coconuts (Husked) for export at Buyers' Stores	per 1000 nuts	152.50 to 155.00	152.50 to 155.00	152.50 to 155.00	152.50 to 155.00
Fresh Coconuts - (Husked) used for copra making and local consumption	,,	150.00	150.00	150.00	150.00 to 152.50
Copra - Estate No. 1 quality at Buyers' Stores	per candy of 560 lb.	154.50	154.50	158.50	158.75
Desiccated Coconut - Wharf delivery or Buyers Stores' Medium and fine 50%	per lb.	0.43	0.43	0 42	0.45
Coconut oil - White, naked wharf delivery	per ton	1100.00	1080.00	1060.00	1075.00

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

Commodity	Unit	Week ending 5-10-63 Rs. cts.	Week ending 12-10-63 Rs. cts.	Week ending 19-10-63 Rs. cts.	Week ending 26-10-63 Rs. cts.
Fresh Coconuts - (Husked) used for copra making and local consumption	per 1000 nuts	152.50 to 155.00	152.50 to 155.00	152.50 to 155.00	152.50 to 155.00
Copra - Estate No. 1 quality at Buyers' Stores	per candy of 560 lb.	163.50	169.50	170.50	161.50
Desiccated Coconut - Wharf delivery or Buyers Stores' Medium and fine 50%	per lb.	0.44	0.44	0.43½	0.42
Coconut oil - White, naked wharf delivery	per ton	1105.00	1110.00	1110.00	1075.00

V. Malaysia

SINGAPORE

Weekly prices of copra and coconut oil at Singapore market during the months of September & October, 1963 are given below:-

SEPTEMBER

Date	Copra $	Coconut Oil $
1st week	31.00	48.25
2nd week	31.00	47.75
3rd week	32.00	48.00
4th week	No	Quotation

OCTOBER 1963

1st week	No quotation	No quotation
2nd week	do	do
3rd week	do	53.50
4th week	do	52.75

NOTE : The prices quoted above are per picul F. O. B. Singapore 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.

PENANG

Average monthly prices of copra and coconut oil at Penang market during the months of August and September 1963 are given below:-

Month	Copra $	Coconut Oil $
August 1963	30.75	48.00
September 1963	32.00	48.75

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.

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.