

PROBLEMS OF COCONUT INDUSTRY

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THE four southern states of Kerala, Karnataka, Tamil Nadu and Andhra Pradesh together account for about 90 per cent of the total production of coconut in our country. The crop is very much important to the economy of Kerala State as its (crops) share is about one-sixth of the annual income and one-third of the agricultural income of the state. It has been reported that coconut culture and industry provide full- or part-time employment to over 10 million people in the country. Every part of the crop is used in one way or other. It is also essentially a crop of the poor since it provides them cash at regular

intervals just like salary for the purchase of basic necessities of life by the sale of nuts and other products from the palm. But because of the peculiar features of this versatile palm, there are several problems facing the growers and others connected with the crop. Some of these are due to the perennial nature of the crop, height of the palm, long prebearing age, lack of an organised set up for marketing the nuts and baffling problems in protection, time lag in response to management inputs etc.

Problems in production

The main feature of coconut cultivation is that it is a small holder's

crop. Over 90 per cent of the coconut holdings is less than one hectare in area. The average size of a coconut holdings is only 0.2 ha. Hardly two per cent of the holdings have an area of two hectares or above (Table 1).

In all the coconut-growing states in the country, the crop is grown in homestead gardens and small holdings. The cultivator anxious to get the maximum return from the available land, seldom observes the principles of spacing and density and grows a number of crops in a haphazard manner. Some combinations are compatible and others incompatible, resulting in over population and consequent reduction in yield. The prevalence of complex diseases like root (wilt) and stem bleeding considerably reduce the production. It has been estimated that the country incurs a loss of about 300 million nuts every year, due to the root (wilt) disease alone, which at the prevailing market rates a loss of Rs 200 million.

The dearth of quality planting materials stands in the way of going for a massive replanting programme. The cultivator in the absence of enough superior planting material goes in for planting material of dubious nature and the folly is realised only after a few years when the palms come to bearing. The seed gardens that are now being established in the southern states are expected to solve this problem in the near future. Because of the considerably long time the palm takes to show response to manuring and other management practices, the extension workers find it difficult to transfer the technology and convince the cultivators regarding the usefulness of management practices. Because of the small size of their holdings most of the farmers are not entitled for credit from financing institutions.

Though the nuts are harvested throughout the year, the production pattern has highly seasonal characteristics. About two-thirds of the



Spinning of coir yarn

TABLE 1. DISTRIBUTION OF COCONUT HOLDINGS IN INDIA

Size of holding (ha)		Percentage of holdings in different regions			
		Kerala	Karnataka	Tamil Nadu	Andhra
Less than 0.20	0.20	37.1	61.5	52.5	61.7
0.20 to 1.00	1.00	52.8	33.2	42.9	36.6
1.00 to 2.00	2.00	7.9	3.6	3.6	1.7
More than 2.00	2.00	2.2	1.7	1.0	—

Source: Coconut Bulletin, May 1970

annual production is collected during the period of January to June, whereas in the second half of the year, the remaining one-third is obtained. This unevenness in the production pattern influences the market prices of the produce also (Table 2). Coconut oil prices show an inverse relationship with the production cycle. During the first half of the year, when production is high, oil prices show a declining trend and *vice versa*.

TABLE 2. SEASONAL INDICES OF COCONUT OIL PRICES, IN RELATION TO PRODUCTION (1960-61 TO 1970-71)

Month	Percentage annual production	Index of wholesale prices/Coconut oil
January	8.58	103.6
February	10.24	99.8
March	13.03	93.8
April	13.49	94.2
May	11.21	95.2
June	10.06	96.1
July	3.94	98.0
August	5.36	100.6
September	5.60	101.2
October	5.74	103.9
November	5.70	107.6
December	7.05	106.0
Total	100.00	1200.0

Source: Southern Economist, December 1973

Marketing

Generally, coconut is marketed for three purposes, namely (i) as tender nuts, (ii) for domestic and religious purposes and (iii) for making copra. Data show that about 3.5 per cent

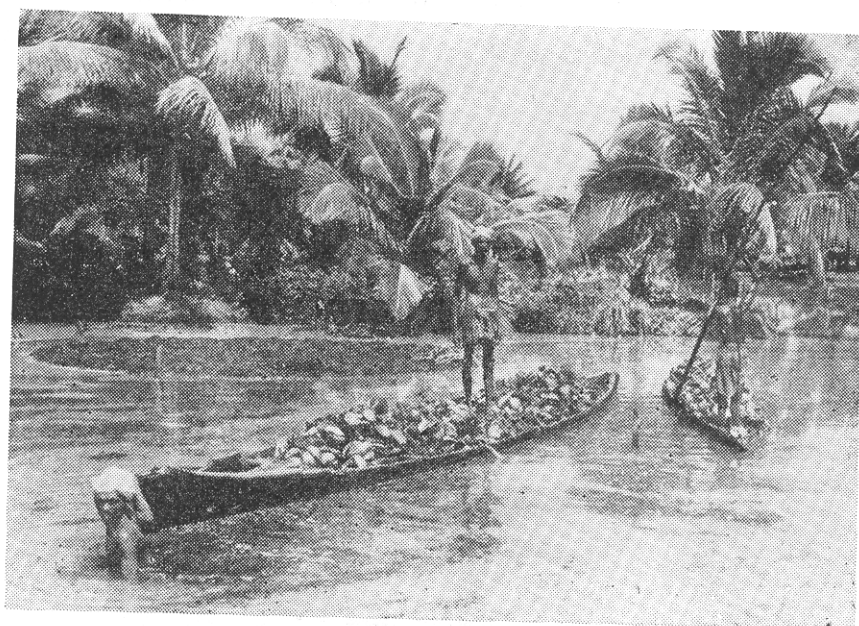
of the total production is used as tender nuts, 57 per cent as nuts for culinary, religious and other purposes, about 8 per cent of edible dry kernels and balance for coconut oil. Tender nuts are mainly sold in cities like Bombay and Calcutta.

The marketing system for coconut and its products is traditional. The marketing channels linking producers and consumers consists of intermediaries namely village merchants/countractors/copra makers, commission agents/oil millers, dealers and retailers within the state. In case of inter-state trade, it passes from commission agents to upcountry millers, organised consumers/wholesales and retailers. The estimated 82 per cent of marketable surplus is marketed in situ to village merchant/

contractor/copra makers. In the absence of effective co-operatives and state participation, marketing is almost a monopoly of the private sector. Though regulation of markets is in force in some areas of Kerala, it is ineffective for various reasons.

One of the significant aspects of coconut marketing is the wide fluctuations in prices between the years as well as during some seasons of the year. There has been an upward trend in the prices during the last decade, but it has steeply come down recently. The erratic price behaviour of coconuts and the recent decline in prices of coconut oil and copra have caused considerable hardship and economic strain to the growers. Since all the coconut growers, except a negligible minority, are small and marginal farmers, sudden reduction in the farm level income without proportionate changes in the prices of other goods and services has made the life of cultivators miserable. Since the production of coconut involves large investment and long gestation period, stability in coconut prices is necessary that promotes long-term investment for the development of this crop.

Coconut-based industries are



Transporting coconut husk for retting

mainly confined to extraction of oil and manufacture of coir products.

Coconut oil. About 80 per cent of the total copra produced in the country is converted into oil of which 75 per cent is consumed in the household sector. The remaining 25 per cent has to find outlets in the industrial sector, mainly in soap industry, where it faces elastic demand. Till a few years ago, coconut oil was indispensable for the soap manufacturing industry. The availability of cheap substitutes coupled with the unpredictable price behaviour of coconut oil has encouraged the soap industry to bring down the consumption of coconut oil.

Another sector where coconut oil can find heavy demand is in the food industry, particularly in the vanaspathi industry. However, coconut oil is not now used in the manufacture of vanaspathi due to Government restrictions.

Even though Kerala State produces about 90 per cent of the milling copra, a sizable portion of this is crushed in mills outside the state (Table 3). The milling sector in Kerala State is dominated by the traditional rotary units. Expeller units are considered to be superior to rotary units for oil extraction and profitability. Though the average

TABLE 3: STATEWISE DISTRIBUTION OF EXPELLER UNITS (FOR COPRA) AND THEIR INSTALLED CAPACITIES.

State	No. of expeller units	No. of expellers	Installed capacity (tons/shift of 8 hrs.)
Kerala	72	120	267.0
Karnataka	3	4	5.8
Tamil Nadu	1	1	0.6
Maharashtra	48	251	479.9
Andhra Pradesh	9	9	3.1
West Bengal	8	18	56.5
Gujarat	1	2	1.4

Source: Directorate of Coconut Development, Cochin.

extraction from expeller mills is 65 per cent oil which is about 2.5 per cent more than from rotary mills, complete benefit of the higher extraction efficiency is not available to the units, because of the wastage in recovery of oilcake and its low quality.

The Directorate of Coconut Development, Cochin, Kerala, recently conducted a survey on the working of the expeller units in Kerala state and has suggested that financial assistance for establishing new units may be discouraged, as the existing units have ample capacity to crush the entire quantity of copra produced in the state, and the funds set apart for the purpose may be utilised to rejuvenate the already established units. Another observation made

by the Directorate was to add a few rotaries to the existing expeller units for first stage crushing and reshaping of the cake. This arrangement will reduce the maintenance cost of expeller units and push up the sales of the cake.

Regulating the imports of other fats and oils, as done in the case of copra imports, will prevent the coconut oil prices going below the remunerative levels.

Coir. Total world production of coir fibre is estimated to be 2,82,050 tonnes of which about 50 per cent is produced in India. Coir industry in India, which supports about 10 lakh people, is labour-oriented depending mainly on its exports. Indian coir enters in the world market in the form of raw coir fibre, spun coir yarn and as woven coir products and finds markets in more than 100 countries in the world. She accounts for over 50 per cent of the world trade in coir.

Though the export earnings have gone up, the quantity exported is steadily coming down. The factors responsible for the decline are (1) the development of synthetic and nonsynthetic substitutes, (2) rising cost of production of coir in India, and (3) availability of sophisticated coir products in foreign markets manufactured in Western Europe and the inability of the local coir industry to adopt mass production techniques, borne mainly out of fear of large-scale displacement of labour.

The high incidence of freight,



Sun-drying of copra

TABLE 4. EXPORT OF COIR AND COIR PRODUCTS FROM INDIA

Year	Quantity ('000 tonnes)	Value (Rs million)
1947-'48	49	52.80
1957-'58	70	78.98
1967-'68	58	132.70
1968-'69	62	145.03
1969-'70	55	136.73
1970-'71	52	138.73
1971-'72	52	148.59
1972-'73	49	149.30
1973-'74	47	155.82
1974-'75	42	175.36
1975-'76	37	193.52

Source: Coir Board, Cochin

lack of shipping space, high import duties, etc. are some of the problems effecting our export. Strengthening the base for export production and development of domestic market are the two basic factors essential for the survival of the industry.

Other products

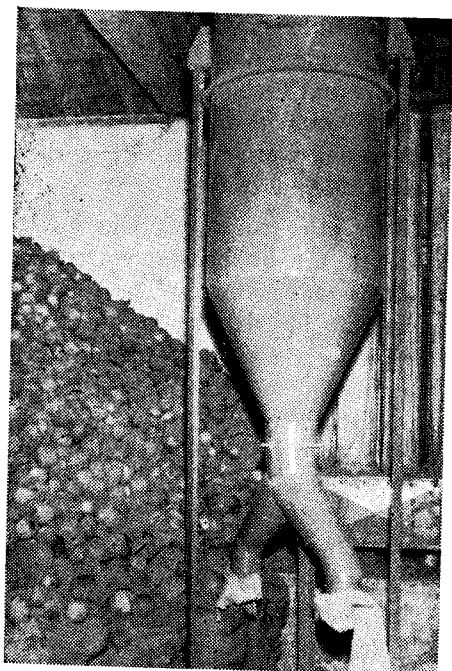
For stabilising coconut economy in the country, the commercial utilisation of all the products from the coconut palm is very important. Oil and coir fibre are the two products which have so far been commercially exploited. The coconut shell is an important product which has not been exploited fully.

In India the estimated annual production of shell is 0.88 million tonnes. The shell contains lignins, pentosens and cellulose. The destructive distillation of the coconut shell gives various useful products. Charcoal, one of these products, is used in iron and steel industry. The activated carbon, evolved by processing charcoal is used for refining of vegetable oil and sugar, controlling odour of water in the beverage industry and in the recovery of fermentation products such as alcohol, butanol, etc. Coconut shell flour finds very wide use in plastic and plywood industries. Curios made out of coconut shell by local craftsmen are in good demand among foreigners.

The coconut water wasted in copra industry can be utilised for making coconut honey, beer, vinegar, etc. The fermented water is acidic and can be used as a rubber coagulant. It is used in culture media as a growth factor. It has also considerable therapeutic properties. The coconut pith can also be used for making insulating material.




Even though technical know-how is available for large scale extraction of oil, protein and coconut powder from fresh nuts we are still in need of some small scale units for protein extraction from fresh kernel. Absence of a suitable copra drier stands in the way of production of better quality copra.

The level of economy of the common cultivator can be raised by increasing the productivity of existing gardens. It is also desirable to maintain the price level without much fluctuations. Any major fluctuation will adversely affect the cultivator. The projected demand of about 7,700 million nuts by the end of the fifth Plan is likely to fall short by about 1,800 million nuts, unless the present production level achieves an increase of about 30 per cent. If the improved production technology including plant protection measures can be brought to the farmers, this target will be achieved. A co-ordinated effort by the different agencies engaged in coconut research and development can solve many of the problems faced by the coconut growers and industry.



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