



Sun-drying of arecanuts

ARECANUT MARKETING IN INDIA

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ARECANUT production should not be viewed as an end in itself. Being a perennial tree crop with a long gestation period, the production needs efficient linking with marketing for deriving maximum economic gains from the investment. In this context, it would be useful to study the trade situation in arecanut.

Demand and Supply

In the 1950s, the demand for arecanut in India was of the order of 110,000 tonnes per annum and the supply from the country was around 75,000 tonnes. The gap of 35,000 tonnes was filled up by imports. In the 1960s, the demand rose to nearly 120,000 tonnes. During early years of the 60s, the

country imported only three to ten thousand tonnes and achieved self-sufficiency in arecanut from 1967 onwards. The average supply of this commodity in India went up to 160,000 tonnes in the 1970s. The present level of supply is around 190,000 tonnes.

Though arecanut production in India is highly localised its consumption is spread over the entire country. The state-wise locations of important assembling and terminal markets of arecanut are as follows.

There are over 150 trade types in arecanut differing in size and shape of the nuts, colour and appearance, stage of maturity, processing techniques and taste characteristics. However, the demand for different

types varies from region to region depending upon the consumer's preference for certain attributes. The market requirements, therefore, influence the decision for growing a particular variety in a region. In South Kanara and parts of North Malabar, the nuts produced are big and oblong in shape. These nuts are converted into 'Chali' for sale in the north Indian markets. Similarly, in Sagar and Thirthahalli areas of Karnataka the nuts produced are small and round in shape. These nuts are converted into 'Rajalu' or 'Pheton' types for sale in the South Indian markets. In the Mettupalayam area of Tamil Nadu the nuts grown are very small with oblong shape. For its ready

acceptance in Delhi and its neighbouring areas, Mettupalayam assembling market has been able to establish a firm link with Delhi terminal market.

Though grading aspect of arecanut is covered under the marketing regulatory measures (AG-MARK), a large proportion of nuts is marketed without any systematic grading. Even in an important market centre like Mangalore, only 40 per cent of the total arrivals of the nuts are now graded.

Arecanut processing in India varies from region to region to suit the needs of the particular types of consumers the region in question is usually expected to serve. The methods of processing can be classified into five major groups as under.

- 1) Fully mature sun-dried whole nuts known as 'Chali'
- 2) Mature undried nuts
- 3) Semi-mature boiled whole nuts
- 4) Tender nuts
- 5) Tender sliced, boiled, coloured and dried nuts known as 'Choor.'

The demand for sun-dried whole nuts is much larger than that of other four types. The areca growers of South Kanara (in Karnataka) and North Malabar (in Kerala) regions process their produce into 'Chali' and dispose them of in the assembling markets for onward movement to Bombay and North Indian markets, where this variety alone is in demand. In South India, there is very little demand for 'Chali'. The consumers of Tamil Nadu, Andhra Pradesh and Mysore region of Karnataka demand for tender nuts sliced, boiled and dried. The supply of this type comes largely from Kerala. Some parts of Andhra Pradesh and Maharashtra receive the supplies of half mature boiled and dried nuts from north Kanara region of Karnataka to suit their demands. Another variety of tender sliced unboiled and dried nuts known as 'Iylan' is supplied from Trichur area to cater to the needs of some of the pockets in South India, particularly Panruti in

South Arcot district of Tamil Nadu. In general, the demand for sundried whole nuts comes from the north and for boiled sliced nuts come from the south. The regional consumption patterns are found to be extremely rigid and the demand for a particular grade is least influenced by other factors. However, the existence of several trade types without well defined parameters creates some problems in price determination according to their attributes.

Ripe dry nuts are generally packed in gunny bags and stored in godowns. The quality of nut depends to a great extent on the storage condition as the nut is susceptible to insect attack and mold attack and discolouration due to moisture absorption during monsoon. For better storage, the nuts are dried to a moisture level of 10 per cent, packed in polythene lined gunny bags, fumigated by sulphur or a mixture of ethylenedibromide and methylbromide and stored in well protected godowns.

In some parts of Assam and West Bengal the well ripened nuts are buried in pits after harvest for a period of 3 to 5 months. These pit-cured unhusked nuts are sold in the local markets to suit the demand of the local consumers only. Similarly, in Kerala, Assam and West Bengal a section of traditional consumers prefer the nuts stored by stepping in water for a short period of three months after harvest. Both the pit-curing and water curing methods are not desirable as the microbial action during the process of curing leads to significant loss of nuts due to spoilage apart from resulting off-flavour and unattractive appearance of nuts. The traditional farmers in those areas should be discouraged to adopt these undesirable methods of storage.

The method of sale of any agricultural commodity depends upon several factors such as the nature of commodity, location and distance from the market, market infrastruc-

ture, economic condition of the producer and market costs. Depending on these conditions one follows a method out of the four methods of disposal of farm produce, namely (1) direct disposal in the market, (2) disposal through the village co-operative, (3) disposal through itinerant traders in the farm gate and (4) pre-harvest contract sale to the traders. The first two methods usually offer better price to the producer than the third and fourth, the last one being the most disincentive practice.

* According to the recent estimates of the Agricultural Produce Market Committee, Mangalore, 55 per cent of areca growers in South Kanara send the produce directly to the market for sale, 20 per cent of them send the produce through rural co-operatives and the remaining 25 per cent dispose of their produce through itinerant traders. Better socio-economic conditions of the areca growers coupled with the improved and organised market infrastructure in this region is responsible for this kind of favourable situation. On the contrary in a backward area like Jalpaiguri district of West Bengal more than 60 per cent of the produce is disposed through pre-harvest contract sale, 30 per cent is sold through itinerant traders, less than five per cent is sold directly in the market and less than three per cent is sold through village co-operatives.

As arecanut is used in domestic sector only for chewing along with betel leaves, one can expect a sizeable, marketable surplus of this commodity from individual growers. The available figures from different regional studies confirm this contention. Under Karnataka condition, the marketed surplus was found to be 87 per cent, 13 per cent being retained by the producers for their home consumption. In Jalpaiguri area of West Bengal the marketed surplus was as high as 96 per cent. In the case of Assam where the per capita consumption of

betelnut is believed to be the highest in India, the overall marketed surplus was estimated at about 80 per cent. There are some very small growers in Assam, who did not even have any marketed surplus.

An analysis of price spread is very useful as it reveals the level of efficiency of the market system under the study. In the case of arecanut, where some of the post-harvest curing and processing techniques are different and somewhat expensive, in addition to the variant terminal for different grades it is difficult to generalise the price spread behaviour. However, the producer's share varies from around 51 per cent in 'Iylan' type in Kerala to 61 per cent in 'Chali' type in West Bengal. The percentage shares of each agency and function involved in the marketing is shown here as an illustration.

In other words, the producer receives only 51 to 61 paise for each rupee that the consumer of arecanut pays. There is no doubt that the producer's share can be enhanced considerably through an efficient co-operative venture.

Market Charges

While the market charges for each of the commodities are well defined in the bye-laws of the regulated markets, these charges are usually found to be arbitrary and high in unregulated markets. The market charges that are prescribed for arecanut by the Agricultural Produce Market Committee, Mangalore are presented here.

Services	Charges (In Rs./bag of 65 kg or part thereof)
1) Unloading	0-24
2) Inward weighment, stitching and staking	0-40
3) Bulking, refilling, stitching and staking	0-51
4) Sampling	0-10
5) Outward weighment, refilling and final staking	0-35
	1-60
Maximum Commission Charges	2%

These charges can be considered as very reasonable.

State	Assembling markets	Distributing/ Terminal markets
Karnataka	Mangalore, Sirsi, Sagar, Shimoga, Bangalore, Hassan.	Mangalore, Sirsi, Sagar, Shimoga, Bangalore
Kerala	Cochin, Calicut, Tellichery, Adoor, Alleppey, Trichur, Palghat, Quilon, Kasaragod.	Cochin, Calicut, Tellicherry, Kasaragod
Tamil Nadu	Mettupalayam, Tiruchirapally, Madurai	Madras, Madurai, Coimbatore
Maharashtra	Sholapur, Bombay	Bombay, Nagpur
Goa	Ponda, Sanquelim, Panaji	—
Assam	Gauhati, Silchar, Nowgong, Jorhat, Tinsukia, Goalpara, Karimganj.	Gauhati, Jorhat
West Bengal	Cooch-behar, Jalpaiguri, Kumaragram, Barasat, Basirhat, Amtala, Midnapur, Contai, Tumluk	Calcutta, Siliguri
Bihar	—	Patna
Uttar Pradesh	—	Lucknow, Kanpur, Allahabad, Varanasi
Rajasthan	—	Jaipur
Union Territories	—	Delhi

Market Arrivals

Market arrival is closely associated with the harvesting season of the crop. The harvesting season in the main producing tract of South Kanara and North Malabar spreads from late October to March. Then the preparation for market (processing) takes one and half months. Therefore, the market arrival for 'Chali' type commences from January. Nearly two-thirds of the marketed surplus arrives in the market between January and June, March being the peak period of the market arrivals.

Seasonal Variation of Prices

The prices of 'Chali' at Mangalore are low during January to June, whereas the prices of 'Hasa' at Shimoga are low during May to August, 'Rasi' at Sirsi are low during November to June, 'Choor' at Trichur' are low during March to July and 'Iylan' prices are low during August to November. This is because the new crop begins to arrive in large quantities at different times in different markets depend-

ing upon the harvesting period and the processing time. The harvesting period again differs from region to region largely due to the variations in the types of nuts wanted for the market preparation on the basis of the maturity.

Price Trends

A look into the price trends of a few important grades of arecanut marketed in the wholesale markets of Karnataka and Kerala suggests that, since 1975 the arecanut growers of this region are getting fairly good incentive price for their produce. Mangalore supari price increased from Rs 459/q in 1960 to Rs 660/q in 1970, then steadily declined and reached disappointingly low level of Rs 425/q in 1973. The direction of this trend again took a turn from 1974 with the formation of the Central Arecanut Marketing and Processing Co-operative (CAMPCO) as a joint venture of Karnataka and Kerala States. The price of Mangalore supari registered an increase of 56.7

per cent in 1974 over that in 1973. While the price of Mangalore 'Choll' in 1974/75 at Mangalore was Rs 740/q it shot up to Rs 1838/q in 1980/81, an increase of 148 per cent within a seven years period. This is really a substantial achievement so far as price incentive for the producer is concerned. The CAMPCO can certainly claim a pride of place in arecanut industry for this significant endeavour.

	'Iylan' Type (Trichur)	'Chali' Type (Jalpaiguri)
1) Producer's share	51.30	61.07
2) Curer's margin	5.36	Curing was done by producer
3) Wholesaler's margin	12.89	8.02
4) Retailer's margin	14.95	9.31
5) Processing charges	2.85	4.96
6) Grading charges	0.52	8.78
7) Packing, storing and transporting	1.60	4.12
8) Purchase and sales tax (market fees)	5.83	2.25
9) Commission	4.70	1.49
10) Consumer's price	100.00	100.00

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RECYCLING OF WASTE

ting. With a little addition of nitrogen source, these materials can be converted into a good manure. The cellulose and hemicellulose components in the husk undergo decomposition in the presence of sufficient nitrogen. It is reported that to every 40-50 units of cellulose and hemicellulose one unit of available nitrogen has to be added to meet the nitrogen demand of micro-organisms. Cattle-dung supplemented with urea or any other starter material comparatively rich in nitrogen can be added to get a good quality compost out of husk, leaf and leaf sheath or other farmyard wastes.

Husk can be utilized also as a mulch. Experiments conducted at this station revealed that mulching with husk improved the moisture-holding capacity of the soil and also the texture by way of better aeration and bulk density. It also reduced the soil temperature up to a depth of 15 cm and suppressed the weed growth.

The lignocellulosic nature of the husk has a negative effect on its efficient use as a source of organic manure. Under natural conditions it will take longer period for decomposition. It is possible to reduce the period of decomposition by introducing efficient saprophytic micro-organisms. This way the nutrients locked up in the lignocellulosic fibrous material may be made readily available to plants.

Laboratory studies conducted at CPCRI, Vittal indicated that degradation of husk can be enhanced by introducing micro-organisms provided sufficient mois-

ture is available. Further studies to identify potential saprophytes for field level experiments are in progress.

The highly lignocellulosic nature of the husk provides scope for cultivation of edible mushrooms or production of single cell proteins.

From the data available it is seen that by proper management of waste materials namely, leaf, leaf sheath and husk we will be saving approximately Rs 324.4 million per annum as detailed below.

Source of nutrient	Quantity available ('000 tonnes)	Approximate cost* (in million Rs)
Nitrogen	35.16	183.4
Phosphorus	9.29	52.2
Potassium	38.10	88.8

	Cost of chemical fertilizers at
Urea	Rs 120/50 kg (46% N)
Phosphorus	Rs 45/50 kg (16-18% P)
Potassium	Rs 70/50 kg (60% K)

An average farmer may find it difficult to meet the demand of the ever increasing cost of chemical fertilizers. An alternative, the best method to compensate this situation is adoption of recycling of various kinds of organic materials, which are otherwise considered as wastes. With some effort, the farmer could get a good compost manure which conditions the physical, chemical and biological properties of the soil. Application of modern technology on the recycling process will help to enhance the net returns from the crop.

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