

Indian Coconut Sector: Trade and Marketing

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Introduction

Of late, coconut is faced with unprecedented crises on account of various macro and micro level factors. The productivity of the crop is constrained by the low input use efficiency in conjunction with other biotic and abiotic stresses which are priority areas of research. The aspects of mechanization also deserve adequate importance, considering the scarcity of skilled labour. Above all, the most important facet is value addition, which should be strengthened to mitigate the issue of low profitability of the sector. The post World Trade Agreement (WTA) and ASEAN Treaty regime witnessed integration of plantation economies across the globe that resulted in fierce competition among producing countries. The coconut palm exerts a profound influence on the rural economy of many states where it is grown extensively and provides sustenance to more than 12 million people in the country. The processing and related activities centred on the crop, generate employment opportunities for over three million people in India. Production and marketing of diversified high-value coconut products from all parts of coconut—the kernel, husk, shell, wood, water and leaves; are a potential source of income and employment for the rural people. In addition, the crop contributes Rs.90000 million annually to the Gross Domestic Product (GDP) of the country. The coconut sector contributes to foreign exchange earnings to the tune of Rs.21385 million, through the export of coconut and coir products. Over 90 percent of coconut farmers in India are small holders and are considered resource-poor. A substantial number of technologies have been developed for enhancing productivity and income from coconut farming. These include high yielding varieties and hybrids, water management and irrigation techniques, integrated nutrient management, coconut based cropping/farming system models, integrated pest/disease management practices and technologies for value addition through product diversification. However, due to various factors the level of adoption of these technologies is comparatively low. Hence, it is highly imperative that a favourable pro-poor policy environment is evolved to protect the interests of coconut growers in the country and appropriate development/extension interventions are implemented to enhance the

efficiency of coconut sector.

Trade scenario

During the year 2015-16 export of coconut products (excluding coir items) was valued at Rs. 1,45,024 lakhs as against Rs.1,31,238 lakhs during the corresponding period of the previous year (Table 1). This shows an increase in export by 11 percent in terms of value. Government of India has notified Coconut Development Board as an Export Promotion Council (EPC) for all coconut products other than those made from coconut husk and fibre vide Public Notice No.169 (RE-2008)/2004-2009, New Delhi dated the 1st April 2009. During the year 2015-16 import of coconut products (excluding coir items) in terms of value was Rs. 38,326 lakhs, that is around 11 percent less than that of the previous year's import (Rs. 42,166 lakhs in 2014-15). Coconut oil cake and coconut oil were the major two coconut products imported into India, of which coconut oil cake accounts for 86 percent and coconut oil accounts for 11 percent in terms of value of imports. During the period, the quantity of coconut oil imported amounted to 1001.88 MT as against 2663.03MT imported during the comparable period of the previous year. The striking benefit derived from the notification of CDB as EPC is reflected in the tremendous increase in the export share of coconut kernel products.

Table 1. Export of coconut products from India

Sl no	year	Export value (rupees lakhs)	Import value (rupees lakhs)
1	2007-08	6901	5593
2	2008-09	17980	10308
3	2009-10	21975	10716
4	2010-11	49592	12077
5	2011-12	94329	20988
6	2012-13	102236	19190
7	2013-14	115612	23111
8	2014-15	131238	42166
9	2015-16	145024	38326

Source: CDB, 2016

India, being deficient in edible oils, import of palm oil is a necessity. The price of coconut oil is closely linked with the prices of other edible oils. Among the vegetable oils imported during the previous year, palm oil and its fractions accounts for 73.10 percent and Palm Kernel oil (crude and refined) accounts for 1.40 percent. Being a lauric oil, imported palm oil seems to be the major competing oil for coconut oil and often beats down coconut oil prices in the domestic market. The excessive import of edible oils especially palm oil that too during the peak coconut production season would definitely trigger price crash of coconut oil. A closer look at the price movement of coconut oil reveals that import of large quantity of palm oil would result in crash of coconut oil price. Although in the very recent times, the coconut prices have become attractive, the confidence of coconut farmer can be elevated only when a stabilized price regime is experienced for a reasonable time frame.

Marketing issues

The studies on marketing margins and costs are important as they reveal many facets of marketing and the price structure as well as the efficiency of the system. The term 'price spread' refers to the difference between the price paid by the consumer and the price received by the producer. Price spread involves not only ascertainment of actual prices received at various stages of the marketing channel, but the cost involved in the process of the movement of the product. The impact of risks is more severe in the case of perennials, in which heavy initial investments are made. Price spread analysis of coconut marketing revealed that nearly about 70 percent of the farmers sell their produce through the village traders as raw coconuts.

Less marketable surplus due to small and marginal holding size is the major reason for the farmers for not undertaking copra/oil production for sale. The marketing channel consists of village traders, whole salers and retailers who in turn sell their products to oil millers and retailers and send some of their lots to upcountry markets as raw nuts, edible or ball copra. Predominant marketing channel identified is Producer-Copra maker-Oil miller-Whole saler-Consumer.

In Kerala conditions the producers share in consumer rupee is just around 64 percent and the market chain consumes as much as 36 percent share in the total value chain. Higher price spread always indicates a lower share of the final price to the producer. In other words it reflects the low marketing efficiency of the market channel. The price spread and marketing efficiency can be improved only through collective and constant efforts in terms of adoption of higher value addition technologies at individual or group level.

Plantation crops are vulnerable to the market related

challenges especially in the context of trade liberalization and free trade agreements (Anoopkumar, 2011; Veeramani, 2011; Brigit, 2004). In the present scenario of frequent fall in market prices and unsteady markets and the absence of a very responsive mechanism/agency for prompt market interventions to ensure remunerative prices in the sector, it would indeed be a herculean task to motivate the farmers to continue with the cultivation and adopt resource-demanding modern technologies (Jayasekhar et al., 2014). Besides, attracting women and youth to agriculture, skilled man power, infrastructure and input support for secondary agriculture are the major challenges. Further, preserving and sustaining the economic viability of all the members of the commodity chains of mandate crops is a major challenge which requires research support for small scale, diverse and sustainable enterprises.

The problems of low income from coconut holdings due to decline in the prices of coconut and its products necessitated the need for development of appropriate coconut based farming systems to enhance the farm level income and development of broad based processing technologies for the sustainable growth of the industry (Mani and Santhakumar, 2011). Consequent to the liberalization of the Indian economy, the domestic industry has not been catching up commensurate with the growth of other world leaders in coconut sector. However, new vistas could be opened up in value addition and product development through infusion of technologies and emergence of a variety of products in the edible and non-edible sector. Now, the coconut industry in the country has realised the imperative need to become competitive. Consumer demands for varied high value products have also started recording an increasing trend.

Coconut prices in India have been historically integrated with the coconut oil prices. Therefore, indubitably the coconut prices received by the farmers are integrated with the MSP of copra. In general the farmer prefers to sell fresh coconut when the price of coconut is attractive, as he receives a remunerative sum in his hand immediately and he can get rid of processing and transportation charges. Contrary to this, if the copra and oil prices are lucrative; farmer prefers to do at least primary level processing which would augment farm level copra production. Therefore, the MSP for copra fixed at higher levels would certainly influence and act as an incentive for primary value addition in coconut.

Having said this, the procurement system of copra in India was always ineffective, and it never elevated the market prices to a higher level. From the NAFED's point of view, the agency, though could procure large quantum of copra and has the capacity to convert copra into coconut, never find the market to push their product

with at least a minimum margin. It should be in such a way that the MSP ensures an incentive for processing to the coconut farmers when compared with that of selling fresh coconut. Other pertinent factors in this context of discussion are lack of effectiveness and efficiency in copra procurement by the agencies and inadequate infrastructural facilities for the storage of copra. It is noteworthy that for the most part of the year copra is traded below MSP.

Strategies for Streamlining

In the evolving trade liberalization regime, sustaining coconut cultivation as a profitable enterprise is extremely challenging. Hence the policies should focus more on competitiveness through higher productivity. One way to achieve this goal is through reduction in cost of production or in other words increase in net returns. There are possibilities of increasing the productivity and net return from coconut gardens by raising compatible subsidiary crops and/or integrating with live stocks. The farming system models of CPCRI have conclusively proved that the scientifically designed coconut-based farming system is not only capable of generating higher income, but also generates additional employment for small-holders (Sahasranaman et al., 1983 ; Hegde et al., 1990 ; Das, 1991; Thamban and Arulraj, 2007). In a scientifically laid out coconut based farming system unlike the traditional ones, the resource use efficiency gets considerably enhanced from crop interactions in the system. Moreover, farming systems are capable of improving the financial status of the smallholder, while permitting him to use the available resources more efficiently.

In this context, it is worthwhile to mention the results of cluster level field interventions conducted by CPCRI at Kasaragod district under the NAIP project. The average yield of coconut in the selected gardens prior to the implementation of the project was 62 nuts/palm (in the year 2007-08). After three years of implementation of the project the coconut yield was increased to 112 nuts/palm, which is 80% more than yield reported from the base line survey. A number of compatible intercrops were grown in the farmers' garden as part of the project, that include banana (four varieties), root crops (elephant foot yam, dioscorea, tapioca), vegetables, fodder grass and turmeric. Besides, pepper, nutmeg and cocoa were also planted in the interspaces of coconut. It was observed that the yield of coconut is better in gardens with banana and root crops (EFY in particular) as intercrops.

Based on the economic performance of different intercrop combinations, five most profitable combinations are presented in Table 2. Coconut garden intercropped with banana, recorded the highest net returns among the different crop combinations. However, this system

is suitable only where assured irrigation facilities are available. A farmer with limited irrigation facilities may choose coconut+ EFY combination.

Table 2: Crop combinations and net returns

Sl No.	Models	Net Returns(Rs/Ha.)
1	Coconut+Banana	288621
2	Coconut+Banana (50%)+EFY/ Veg(25%)+Turmeric(25%)	259701
3	Coconut+EFY/Veg(50%)+Turmeric(50%)	230782
4	Coconut+Turmeric	199705
5	Coconut+EFY(Rainfed condition)	163101

It is categorically proved that, scientific coconut based farming systems will mitigate the price risks of coconut monocropping by providing adequate additional returns. The recent field results from ICAR-CPCRI shows that coconut based cropping system, using multi species cropping of coconut with pepper, banana, nutmeg, pineapple, ginger, turmeric and elephant foot yam generated a net income of Rs 3, 62,595 per ha, which is 150% higher than that of coconut monocrop (Rs 1,41,505), where as coconut based mixed farming system (CMFS) with coconut, pepper, banana, crossbred cows, poultry birds, goat and pisciculture generated a net return of Rs. 5,50,214 which is 288% higher than that of coconut monocrop.

It is of paramount importance to develop an exclusive policy by each coconut growing state for production and supply of elite planting materials to the farmer. Each state should have a separate policy frame for the area expansion and rejuvenation programmes and for the generation of required planting material of suitable varieties. There should also be separate development schemes for the execution of the programmes according to the policy frame.

Community Based Organization of coconut farmers at different locations may be identified for establishing certified coconut nurseries for the production of elite planting materials. The ongoing decentralized planning programme in states like Kerala can support such initiatives for farmer participatory schemes for production and distribution of elite planting materials. The decentralized seedling production programme can be strengthened by maintaining a centralized pollen storage and supply mechanism to ensure the quality of the pollen parent. Accreditation should be made mandatory for all coconut nurseries as a regulatory mechanism and ensuring control in the production and distribution of planting material.

CPCRI being the pioneering national research institute involved in developing improved varieties of coconut can provide breeder seed/source material for establishing nucleus seed gardens. Besides, CPCRI can also play a vital role in the capacity development programmes on nursery management to be organized for the benefit of technical personnel of CDB and state Agri/Horticulture Departments. Collaborative programmes involving stakeholders representing private sector nurseries are also important in formulating viable strategies for ensuring production of sufficient quantities of elite planting materials. CPCRI has already supported such initiatives by imparting training on hybridization technique to the technical personal of private nursery groups.

There exists a huge scope for coconut based agribusiness in India with reference to processing and value added products. The crop provides employment opportunities to more than 10 million people in the country. Agribusiness management on a mission mode approach aims for maximization of farmers' income, employment and sustainability (Sairam et al., 2008). Technologies are available for individual processing for the production of snowball tender nut, coconut chips, copra, vinegar, desiccated coconut (DC), coconut shell charcoal, packed tender coconut water, coconut cream and milk powder. The economics of production of coconut based value added products indicates fairly high level of capital requirement towards establishment and operation of these enterprises. The attractive returns from the business will, act as the motivating factor and moreover, coconut farmers are expected to realize better price stability in long run.

Due to the growing consumer demand for Desiccated Coconut across the world, there exists immense export potential for the product. The capital investment required to start up a Desiccated Coconut production unit with capacity to process 15,000 coconuts per day, amounts to Rs 1.29 Crores. It is noteworthy that there are attractive export promotional schemes initiated by the Government of India under the new Foreign Trade Policy (2015-20), wherein under Merchandise Export from India Scheme, five percent export subsidy can be availed on Free on Board (FoB) prices. There is also a Duty Draw Back scheme wherein up to one percent of the FoB prices are refunded for the service taxes paid for raw materials and other input services for the production of Desiccated Coconut.

Virgin coconut oil (VCO) has received much attention globally in the recent times. The popularity of VCO is growing among consumers in all the continents due to its myriad properties including potential health benefits. Feasibility analysis of the project on commercial production of virgin coconut oil revealed a Benefit

Cost Ratio of 1.12, and an Internal Rate of Return of 21.5 %. Thus, we may conclude that the commercial production of Virgin Coconut Oil could turn out to be a profitable venture. Though the market of VCO is expanding in the domestic and international front, as a matter of fact, India is yet to realize the potential benefit that the country holds in this segment. It is imperative to establish good quality, technically advanced VCO units across the country so as to realize the competitive market share of VCO in the global market.

As a matter of fact, processing and value addition in coconut sector has to be scaled up manifold. India is lagging far behind in processing for value addition and export even in comparison with countries like Sri Lanka. The coconut industry can be revived if it is made part of Prime Minister's 'Make in India' campaign. This can be made possible through formation of coconut parks across the major hubs, which can provide new impetus to the coconut industry by ensuring economic enhancement of the farmers and other stakeholders through large scale activities.

Summing Up

In the future, it is envisaged that globally well connected and highly interlinked commodity chains will evolve, requiring a reorientation of the scope of the research and developmental Institutes to accommodate the restructured commodity chains and changing concept of commodity markets. The Institutes should take a lead role to re-engineer and revitalize the coconut sector in the country by providing adequate emphasis on product diversification and creation of neo-market platform to promote coconut as an organic health drink with Good Management Practices (GMP), Good Agricultural Practices (GAP) and Hazard Analysis and Critical Control Points (HACCP). Institutes should facilitate co-creative, innovative, vibrant social enterprises which will enable to pass on the value creation in coconut sector to farmers in an appropriate manner which reduces the social disparity. With the growing realization of lesser profitability in small farm holdings, producers/farmers should be encouraged to get together and form into small cooperatives or crop based organizations to develop and utilize community facilities for farm operations, post harvest processing and marketing to economize on production as well as marketing costs. Further, research orientation will lead to an increase in the number of economically viable coconut farms of different sizes and increase in the number of processing enterprises. For the vision of developing a sturdy and vibrant coconut industry which does not depend on copra or coconut oil to come true, we need to come up with a breakthrough coconut product which is strong enough to capture the niche export market segment.

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