Coconut oil market – an insight and the way forward

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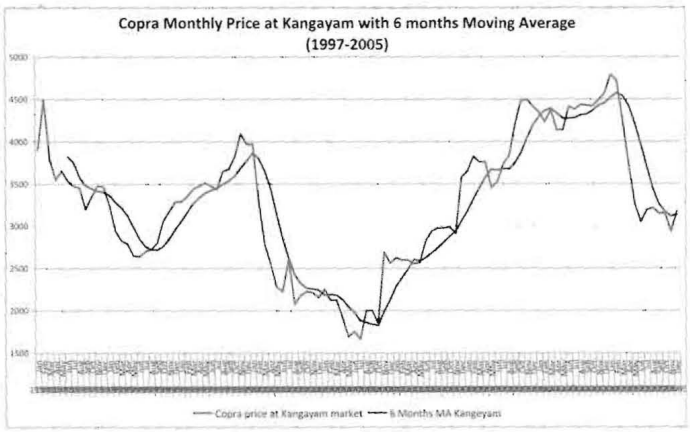
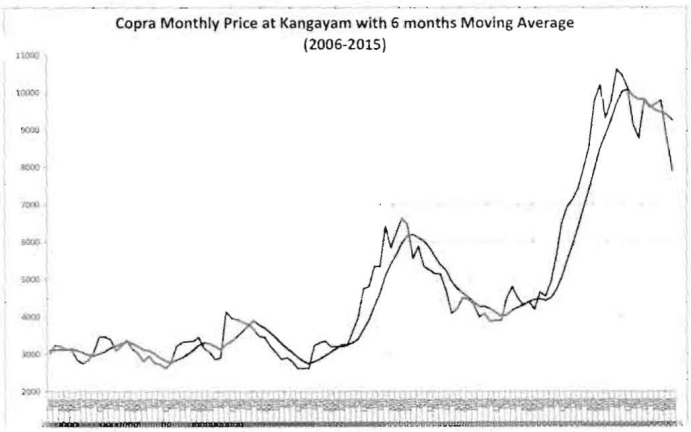
Coconut is a versatile crop grown all over the world. India, Philippines and Indonesia are the major producers of coconut accounting for three-fourth of the global coconut production.

India accounts for nearly 31% of global coconut output. Kerala, Tamil Nadu, Karnataka and Andhra Pradesh are the leading producers of coconut in the country. Coconut, copra and coconut oil markets are concentrated in these four southern states of India. The price of coconut and coconut oil is influenced by many factors viz. production, global demand, policy decisions of the government formulated from time to time, price of other vegetable oils etc. The marketability and price realization of coconut and coconut products determine the financial security of the coconut farmers. The price behaviour of coconut and its products has a profound influence on the rural economy of many states of India.

This article is making an econometric analysis of the price of coconut oil and copra in the last three decades and the farmers are warned on how to tackle the price fluctuations. Coconut oil is purely an elastic commodity as every movement in its production and consumption are reflected in the price. To analyze the price behaviour, the basic principles of Time Series is used for the analysis, which comprises of four components viz. trend, cyclicity, seasonality and irregularity. The presence of all these factors is clearly visible while observing the price behaviour of the last three decades. The monthly average and daily price of copra and coconut oil for the last three decades (decade wise) were taken for analysis from three markets in Kerala, viz. Kozhikode, Kochi and Alappuzha and from Kangayam market in Tamil Nadu. The market price from 1988 to 2015 were analyzed based on the comparison between price and moving average. While plotting moving averages with periods of 30, 45, 60, 90 and 120 days, it was observed that the 120 days period moving average for daily price and six months moving average for monthly price is most suitable for interpretation. As a good relationship between copra and coconut oil exists in all the markets, the movement

Montly Price of copra at Kangayam market and six months moving average





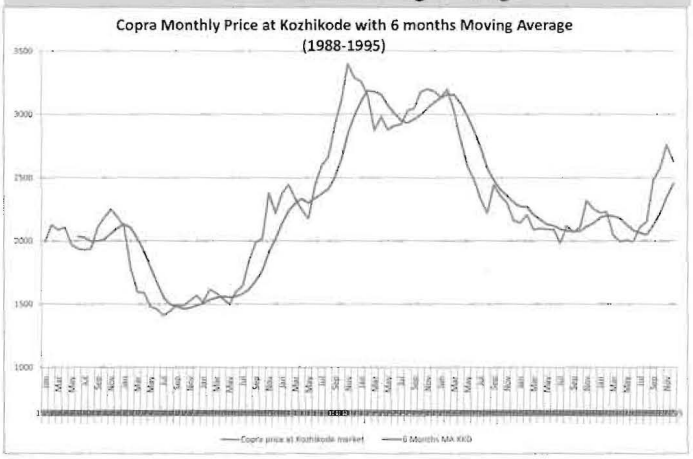
of price of these products in different markets is almost alike.

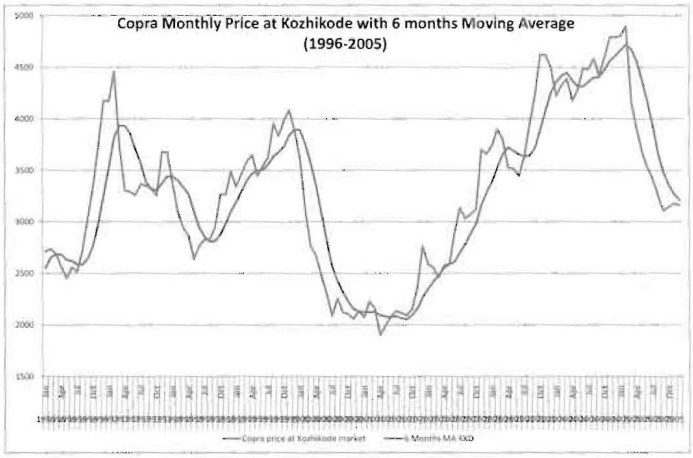
Even though there were fluctuations comprising of bullish and bearish phases, ultimately an overall increasing trend is visible in the price of coconut products during this period. The difference of price recorded at two crests and troughs in consecutive cycles is constantly increasing. During the first decade, the lowest price of Rs.1439/- per quintal for copra at Kochi market was recorded in July 1988, whereas the highest price recorded for the same commodity in the same market was Rs.3005/- per quintal, in November, 1991. While the difference between these two extremes is Rs.1966/- in the first decade, a higher increase in difference is observed in the next two decades. Similarly, the difference between the price recorded at crests and troughs in successive cycles is also increasing. Apart from this, there also exists regular cycles. While examining the wave lengths of these cycles, it can be seen that, even though there were no relation between these cycles in the earlier stages, the cycles in the third decade (2006-2015) depict a uniform pattern. The difference in periods of cycles of two successive increase and decrease is more or less uniform, whereas, the length of cycles during a price increase is three years and the same during a price decrease is almost two years. As such, eventhough a fall in price is expected upto August 2016, the prices remained without much noticeable decrease. Farmer Producer Organizations can stabilize this price trend through recourse mobilization, procurement and marketing of products through their three tier farmer collectives.

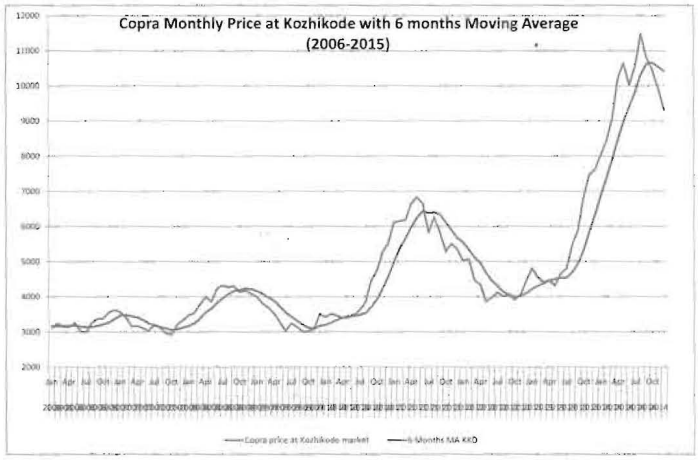
Seasonality is another factor which is strongly visible in the coconut market price. In general, coconut prices remain low during the monsoon season and with the onset of winter season the price starts picking up. Based on the monthly price, it can be observed that the highest prices are recorded during November-December and lowest prices during May-June.

The close of harvest season in Kerala and Tamil Nadu, sluggishness in tender nut demand during monsoon and the increasing demand from upcountry markets for coconut oil during festival seasons were attributed as the major reasons for this changing price pattern. Presently, the price pattern is influenced by various other factors such as setting up of tender coconut water, virgin coconut oil and other coconut processing units in Tamil Nadu and Karnataka and the increase in the usage of tender coconut from the earlier 10-15% to 25% of the production. Coconut Producer Companies formed by farmer collectives are also setting up coconut value added production units. Global giants like Vita Coco and C P Group are associating with Indian companies in setting up units in India. Many more companies are in the process of commencing production in India, either directly or through joint ventures. Since the main harvesting season in Kerala is from January to

Montly Price of copra at Kozhikode market and six months moving average







May and that of Tamil Nadu is from February to June, there is a tendency of recording low prices from December to June while the arrivals are low. The three tier farmer producer organizations can arrest this price fall or can keep the price steady through proper coordination. The population of urban India is higher than the total population of USA and 75% of this urban population is having better purchasing power. Coconut farmers can tap this opportunity by introducing maximum value added coconut products in the urban centers of India.

During these three decades, especially during the period from 1980 to the beginning of this millennium, randomness in price is visible, as the wave lengths during the periods of increasing and decreasing cycles doesn't show a uniform behaviour. The highest bullish phase recorded in this period is during September 2013 to August 2014, which is an all time record. The price of copra in Kozhikode market sky rocketed from Rs.5,887/- per quintal to Rs.11,475/- per quintal and coconut oil from Rs.8,620/- to Rs.17,524/- per quintal. Compared with the other bullish phase in these three decades, the increase from trough to crest during this cycle is huge and stable. As a result the difference between the highest and lowest price in the third decade is also high.

Reasons for price fluctuations

Two major reasons are attributed to the recent price variation. Coconut production in the four southern states is showing a decreasing trend and contributes to 89% of the country's total coconut production. The impact on shortage of the produce as a result of this decrease is much higher. Results of the statistical survey for concurrent estimation of production and productivity of coconut in India conducted by the Board since 2012-13 also underline this fact. As per the study conducted during 2014-15, a decrease in production is estimated in the states of Kerala, Karnataka and Andhra Pradesh. Compared to the previous year, production in Kerala is expected to record a decrease of 17.48%, while in Karnataka the estimated decrease is 4.87%. Even though a slight increase is estimated in the coconut production of Tamil Nadu, compared to the higher production decrease in the state during the previous year, a decrease in coconut production in Tamil Nadu is also observed during 2014-15. The all India production of coconut in 2014-15 is estimated to come down by 10% compared to the previous year.

Andhra Pradesh, which was severely affected by two successive cyclones, viz. Phailin in 2012 and Hud Hud in 2014, is expected to experience the highest fall in production in 2014-15. As a result, the processing companies in the state will be forced to procure produce from the neighboring states to meet their production capacity. Quite naturally, as per the basic demand-supply theory of Economics, variations will be evident in price. From 2012 onwards, diversion of coconut for value added products like processed tender coconut water, virgin coconut oil, desiccated coconut powder, coconut milk, coconut milk powder etc. is increasing. The change in the consumption pattern of coconut also catalyzed the steep increase in price during 2013 to 2014. It is natural to experience a bearish phase for all bullish phase in each cycle. But, maintaining price stability and wave length between cycles to the minimum possible extent depend on how the coconut farmers react to the price behavior.

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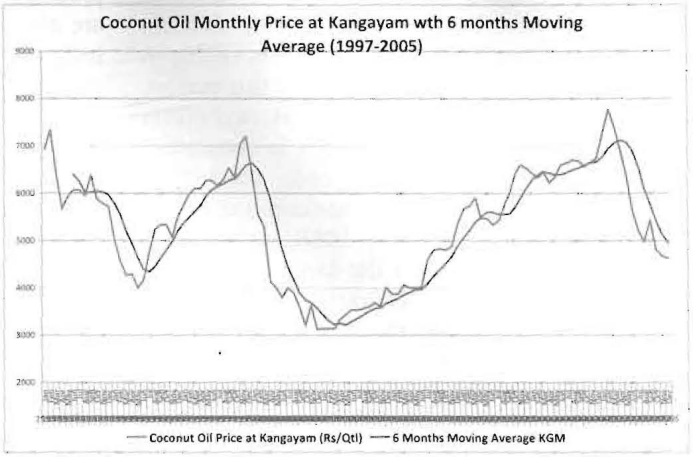

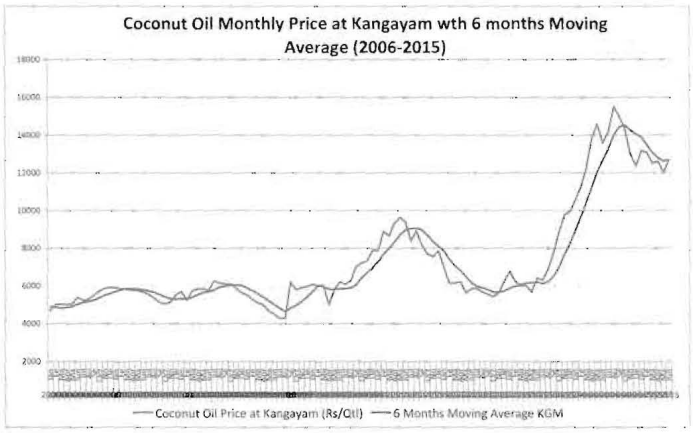

Limitations and Remedial Measures

As individuals, farmers have limitations in intervening into the market, but as collectives, unlimited opportunities are awaiting them. The formation of three tier farmer collectives in coconut sector has gained momentum and is spreading across the country with more vigour and strength. Within a

short span of five years, this movement has reached in the formation of 7806 Coconut Producer Societies, 580 Coconut Producer Federations and 35 Coconut Producer Companies. Definitely these Farmer Producer Organizations (FPOs), can react and take precautionary steps against the price fall. Farmers should not get panic and stop selling their entire produce at the available price in case of false propaganda on price fall. Under the efficient leadership of FPOs, the farmers should have a clear plan for procurement and processing and work accordingly so as to control arrival of produce in the market.

In this scenario, Coconut Producer Companies, the upper tier in the FPO has a major role to play. Tapping 1% of the total palms for Neera production, (tapping 10,000 palms, based on the assumption that a company is having 10, 00,000 bearing palms under it), setting up coconut oil processing units with capacity of five MT per day, installing modern copra driers in all the Federations (with the capacity to process 10,000 nuts per batch), setting up virgin coconut oil units with a capacity of 25,000 nuts per day etc. need to be the immediate target of the the Coconut Producer Companies. Through this movement, by products such as husk, shell and coconut water can be effectively used to generate additional revenue to farmers. There is also need for the companies to cooperate in marketing of coconut products. Think of a situation where 100 Coconut Producer Companies are formed all over the country and they plan strategies and execute it with good team work. This will definitely change the scenario and will certainly give a facelift to this sector. In addition, Companies should also aim at increasing the productivity of coconut. Agricultural and management practices shall be planned accordingly. Since the availability of agricultural land is scare and costly, increasing productivity is a better option to increase production. High revenue can be realized through a marginal increase in the cost of inputs. Availability of good planting materials is also to be ensured. Companies should promote local nurseries in each Federation which can ensure the timely supply of good quality coconut seedlings to farmers. Taking up good management practices, adopting novel irrigation methods and structural changes in coconut cultivation is the need of the hour.

This article is an attempt to inform the farmers about the external forces that create temporary sluggishness in the coconut markets with vested interest. The objective of the study is to inspire and motivate the farmers and to educate them to react accordingly. Statistics section of the Board will continue with the studies and disseminate the observations and information to FPOs on a fortnightly basis. Board welcomes Research and Educational Institutions to become part of this study. ■

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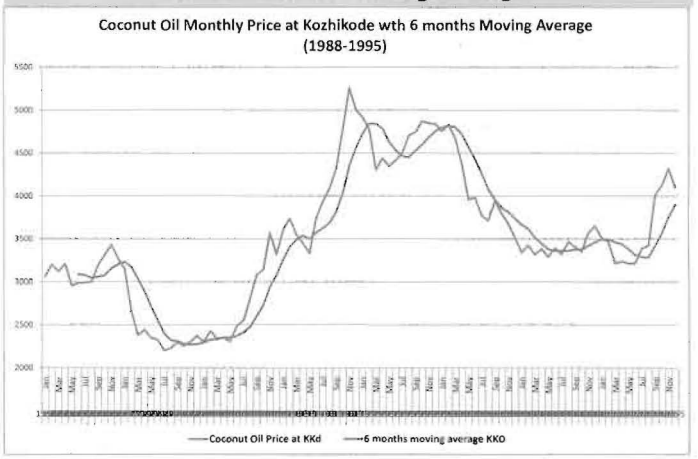

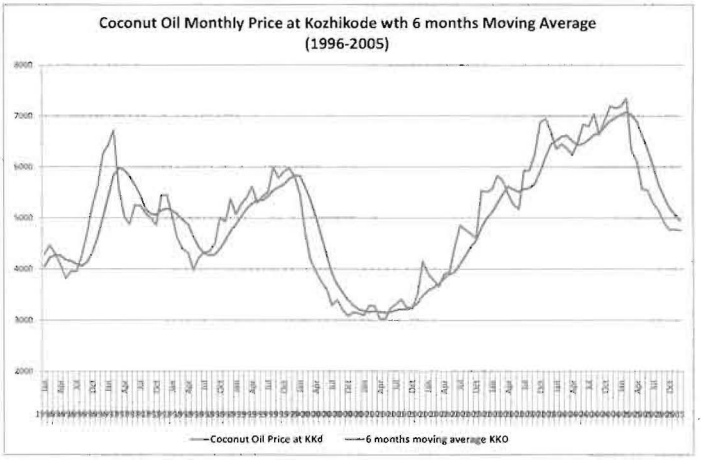

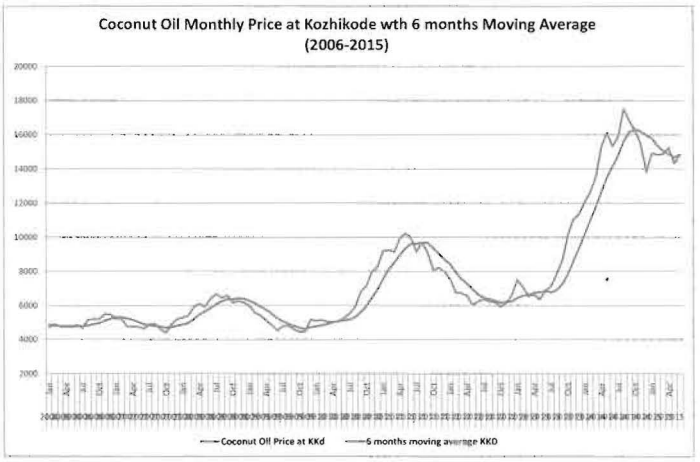

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