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A concerted team work needed to tide over the current crisis in coconut sector

Dear Coconut Farmers,

Coconut farmers are reeling under a severe price fall in coconut, copra and coconut oil. PSS operations by NAFED are going on. But unlike the previous years, the PSS operations could not make much positive impact on the price trend. No doubt, but for PSS operation price fall would have been more severe. In India, in the southern states which are the major producers of coconut, the price of coconut is directly linked with the price of copra and coconut oil. Only a fair and reasonable price for coconut oil can, in turn, assure a reasonable price for coconut. In order to identify solutions for the price fall we have to analyse the reasons for price fall. After understanding major factors contributing to the price fall, we have to initiate measures for arresting this trend. Urgent policy decisions and Government interventions on a war footing is necessary to help the Indian coconut industry to tide over the crisis.

The international price of coconut oil is an important factor in deciding price coconut of coconut oil in India. Since domestic as well as international prices of coconut oil are now almost at par, export of coconut oil is possible. Other factors like the prices of other edible oils, its availability, shortage, import of various edible oils to India, export of coconut oil from India and PSS operations based on MSP are having their share in deciding market prices of coconut oil. Normally lesser rain fall might have spiked the price of agricultural crops; especially oil seeds. But coconut oil is the only edible oil in India, still reeling under very low price.

We have been facing shortage of edible oil during these years. The anticipated decrease in the production of edible oils due to delayed monsoon and the shortage of rain may aggravate the situation. Keeping this in mind, edible oil importers already hiked their stock of edible oils. The country has already imported around 12 lakh tones of RBD palm oil and 34 lakh tones of crude palm oil (November 2011-June 2012). At present, crude palm oil has zero import duty and refined palm oil has an import duty of 7.5%. Import of palm oil is

almost doubled during this year. The recent ban on export of coconut oil adds fuel to fire.

The country is having restriction on the export of all edible oils and coconut oil is one among them. The ban on export of coconut oil, which is used as edible oil only in Kerala seems to be little irrational. Unrestricted export of coconut oil is allowed only through Kochi port. The restricted export of coconut oil permitted earlier through other EDI ports is banned with effect from 1st August 2012. If the export of coconut oil in bulk packing is allowed atleast through all the South Indian Ports, we could have garnered the sizeable market for coconut oil in the Middle East countries. At present this market opportunity may go to Sri Lanka and Philippines.

The huge ethnic population of South Indian people in the Middle East countries offers great scope for the penetration of Indian coconut oil in their markets. It is estimated that around 50000 MT of coconut oil is annually used in Middle East markets. The ban of export from India opens up avenue for Sri Lanka and Philippines. This may again affect the export of Indian coconut products. This calls for a situation wherein the farmer collectives and representatives of people must intervene to convince the government to lift the ban on export of coconut oil.

Acceleration of MSP procurement by State level procurement agencies and strict monitoring of the procurement process by state governments are other important factors that can help farmers. Procurement must be based on definite targets in close association with farmer collectives. Transparency must be ensured in the procurement operations with procedures made more logical and simple by state level agencies. There are complaints that some state level agencies are even enforcing conditions not stipulated by NAFED.

Considering the severe fall in the prices of copra, State Governments must consider extending additional support to farmers. The State Government of Karnataka has already sanctioned an additional incentive of Rs.700 per quintal of copra apart from the MSP of Rs.5350/- per quintal for ball copra offered

by NAFED. This additional support has created very good impact in the ball copra market of Karnataka and the price has reached at par with the MSP. Board has solicited the Governments of Tamil Nadu and Kerala to extend similar support in their states too.

Creation of additional infrastructure for copra making is another area that needs to be explored on a war footing. Board is extending 50% financial assistance for installing modern copra dryers with a minimum capacity of 10,000 nuts per batch to Federations of CPSs. The State Governments may also mobilize funds for creating modern dryers for copra making. Similarly local self government institutions through their plan funds for production sector may encourage farmer collectives like CPSs and Cooperative Societies to establish modern copra dryers. A uniform rate of 50% subsidy for the copra dryers may be thought of by all agencies. The immediate need of the hour is a policy decision at the government level for this purpose.

Commission for Agricultural Costs and Prices (CACPC) has initiated action for deciding the Minimum Support Price for copra for the next season. The committee is planning to visit Tamil Nadu and Kerala for collecting information from the farmers and the farmer collectives. Coconut farming community must make use of this opportunity for appraising the commission for fixing a fair and remunerative price for their products.

Tender coconut marketing is another avenue that needs to be exploited fully for arresting this price trend. None of the coconut products other than copra and coconut oil are affected by this declining price trend. Maximum tender coconut harvest must be made during September-May season. This will ensure early and better income to the farmers and also will arrest the excess inflow of matured coconut and copra to the market in the next season.

Product diversification, value addition and by product utilization are the other key areas that must be attempted on an emergency basis. Coconut does have a product basket with an array of value added products like virgin coconut oil, desiccated coconut, coconut milk, coconut milk powder, milk cream, ball copra etc. It is high time that our farmers through farmer collectives venture into processing for value addition. Coconut Development Board under the Technology Mission on Coconut is extending technical and financial assistance

for establishing coconut processing units. CPS, their Federations and Producer Companies can take up such initiatives by availing the financial assistance of the Board. Along with Board, State Governments must also undertake intensive promotional campaigns to increase the consumption and utilization of various coconut products.

Policy interventions both at the central and State Government level are now vital for protecting the coconut sector of our country. It is the responsibility of the concerned state governments to ensure that these policy decisions are reaching the grass root level, through various programmes and projects. The Government of India had declared the MSP for copra and designated NAFED for the procurement operations. But the responsibility lies on the state level designated agencies and they must ensure that the procurement process is hassle free. Coconut Producers Societies have to take the lead in the supply of FAQ copra to procurement agencies. Thus the national level agency, state level procuring agencies and the farmer collectives must work in tandem for making the national policy of MSP functionally benefitting coconut farmers. Effective teamwork is needed for this purpose and this is the right time to invigorate such teamwork.

Neera tapping is another area which needs to be explored. All the major coconut growing countries are effectively utilizing the potential of Neera both in their domestic as well as in international markets. It is high time that in our country also, State Governments must take policy decision for issuing license for producing coconut neera to farmers' collectives thereby enabling the coconut farmers to get steady revenue. Tapping of the inflorescence opens up still larger avenues for other products like coconut flower syrup, honey, coconut palm sugar etc.

As adversities are the right time to bring out the best in everything, let us positively hope that this period of price crash would inspire the farmers to diversify, would motivate the policy makers to make structural changes and finally educate the consumers and bring about an attitudinal change towards effective utilisation of coconut and its products.

With regards,

T K Jose



Chairman



The way of presentation is what ultimately matters in the market

Deepthi Nair. S.

India takes pride in being the nation in third position in area under coconut behind Indonesia, second in production next to Indonesia and first in productivity. The recently held technical seminar of the Asia Pacific Coconut Community, Cocotech was an eye opener to India. We are miles behind other countries, even countries like Malaysia, in processing and value addition, packaging, highlighting the nutritional and health attributes of different coconut products. We have been idling our time away during the years since globalization concentrating on copra, coconut oil and to some extent desiccated coconut. We never bothered to catch up with the other countries and if we don't act even now, our country will turn out to be a consuming market for the products from other countries. Even today, our capital city has shopping malls with coconut milk from Thailand,

Indonesia, Philippines and Srilanka. The branded coconut powder that is consumed here is produced in Srilanka.

It is high time that we change our attitude towards marketing of coconut products. The price of coconut, copra and oil has been dwindling since September 2011 and has gone below the Government of India declared Minimum Support Price (MSP) from the beginning of 2012. Even eight months after, the prices have not increased or stabilised. The Price Support Scheme for procurement of copra under MSP was initiated under the auspices of NAFED in the major coconut growing states, but the procurement process has not gained momentum and the procurement volumes not adequate to create an impact on the market prices resulting in stabilization of prices. Our marketing strategy has to be

changed to suit the requirements of the consuming market, whether domestic or global.

Coconut cultivation is being undertaken on a traditional basis in most of the states and production is not suited to market wants. Agriculture is considered as a way of life rather than a source of income. In today's globalised world, what we produce should not only suit to the market demands, but also be properly presented before the consuming world in the best manner. Consumers are not coming to buy commodities, instead they want differentiated products. The new marketing concept is to undertake speciality marketing of the differentiated products. Farm marketing has evolved from subsistence farming through self sufficiency farming to farming for marketable surplus. Food marketing doesn't begin now at the farm gate,

it begins right from the decision of what to cultivate.

Marketing strategies for a particular product is usually planned based on the 6 P's of marketing. The product should deliver the benefits at the right cost. The packaging should be appropriate for the product and the targeted customer group. The price should be apt to create and extract real value. The promotion of the product should be considered and perceptions should be framed and conveyed to stimulate buying. The place is of utmost importance and it should provide access, availability and support to the customers. The overall objective always should be to attract, acquire and also retain good consumers. Marketing strategies are developed concentrating on one or more of the above attributes. The major attributes that form base for the marketing strategy for agricultural commodities are discussed below.

Organic/certified produce

The quality conscious consumer sees everything from the quality point of view in these days. When the talk is always around endosulfan and pesticide residues and aluminium phosphide, ensuring a quality process of production of the product will aid in promoting the product and assuring a premium



price for the product. There are innumerable plantations in the traditional coconut growing states and in Lakshadweep and Andaman and Nicobar islands where cultivation of coconut is undertaken in the organic manner without the application of chemical fertilizers. On one side, the farmers are not aware of the market prospects of organic certification, or those aware do not take certification. There are others who have got their farm certified but do not market the produce as organic. For a grower who is not adding any chemicals to the crop, getting organic certification is just a matter of documentation.

causing any kind of damage to plant life, animal life or mankind are marketed as **“Healthy grown”** in the global market. An organic or certified coconut plantation can undertake marketing of their tender coconut, mature coconut and processed products under the organic label. Though a niche market in our country, the organic/certified market is growing at an increasing pace. The world over, people believe that organic foods are healthier. The market share for organic food is also increasing day by day. Ensuring quality of product through certification of the crop is a marketing strategy that is gaining prominence in this world.



If not organic, the grower can go in for certification under Good Agricultural Practices (GAP), which will give an added advantage to the produce. The farmers in Growers Associations can even opt for Group certification thereby reducing the costs of certification. Crops grown in an environment friendly sustainable manner, without

Natural products

When world over the cry is for conservation of nature, anything directly from nature has a premium place in the quality world. Coconut is a totally natural product whose taste and flavour cannot be made synthetically. For instance, tender coconut water is a nutritious, nourishing, health drink rich in

electrolytes. There is considerable sale of tender coconut being undertaken along the highways and dusty paths along the roadsides. The premises are open and exposed to the dust from the highways. Still the consumers are attracted to the vendors as a thirst quenching drink even without promotion. A marketing strategy highlighting the drink as an undiluted, unpolluted, unpoisoned drink is bound to increase the proportion of health conscious consumers. A natural product without any added substances, directly from the farm will attract the elite consumer group. The marketing strategy should highlight specific attributes of the product targeting specific customers.

A drink direct from nature will attract the middle aged and grown ups, but to target the youngsters, teenagers and kids, an aerated drink to compete with the soft drinks in the market is inevitable. Aerated tender coconut and mature coconut water are already in the market. A little promotion of the product will

increase the marketability of the product.

Marketing strategies like **Direct from the farm, Produced locally** etc are used in developed countries for the marketing of agricultural products made locally and

sourced directly from the farmers. A similar strategy was adopted by the farmers of Federation of

Coconut Producers Society, Muthalamada, Palakkad who are operating tender coconut outlets within the IT hub in Kochi, central bus stations etc. They introduced a sticker on the tender coconuts in the bunch depicting the name of their federation. The sticker was a token of the freshness of the tender coconut and direct sourcing from the farm. If apples with stickers could fetch higher premium price,



why not tender coconuts? The tender coconuts supplied had good market value since they were sweeter and tastier than the normal tender coconuts in the market which are often 10-15 days old. The product should be marketed in such a way that the speciality of the product is high lighted.

Diverse tastes

Coconut water, whether tender or mature has a specific taste. Adding flavours to coconut water which blend with its natural taste will provide a variety of options for the consumer. To maintain the natural status of coconut water, we can go in for natural tastes instead of the artificial man made flavours.

Coconut chips is a snack food which provides a variety of options for flavouring. Even multinational snack giants are found to move the way of natural flavours. Kurkure, for instance, advertises its products as Taste of Home instead of its earlier slogan describing the different tastes. Flavours like mint, ginger, pepper, lime, tulsi, cardamom etc can be used in coconut chips and tender coconut water. Its adds to the variety and taste of the product and opens a new world of natural flavours before us. The network of tender nut kiosks called Nature Nest in Bangalore has opted for this marketing strategy by offering tender nut in different tastes.

Nutritional content

The consumer world is getting more and more conscious of the nutritional content of the food they consume. Exhibiting the nutritional content on the package is mandatory in our country too. For instance, tender coconut water is not only a nourishing drink but is also rich in the essential electrolytes like sodium, potassium, magnesium, calcium and phosphorus. People consume tender coconut water not because it is nutritious, but traditionally they are used to consuming it in hot times. The basic nutritional facts about coconut can be taken as a marketing strategy to increase consumption. Tender coconut is introduced as a health drink by a major multinational company in the United States. They recommend it as a sports drink for sports people. The fact that the medium chain fatty acids in coconut oil do not cause health problems in humans and the positive health attributes of the products have to



be popularized and taken as a marketing signal to increase the consumption of coconut oil. Virgin coconut oil possess inherent health attributes which can be used for increasing the marketability of the product.

Health attributes

All products from coconut possess many health attributes. Tender coconut water is not only a health drink but is also a product with zero fat, zero cholesterol and zero added sugar. It has been known from time immemorial as an effective rehydration drink and is known to have been given even intravenously during famine and

wars. When tender coconut water is marketed for hospitals and patients, it is this attribute that needs to be highlighted. In New Delhi, some hospitals are recommending packed tender coconut water to patients. Virgin coconut oil increases the good cholesterol, i.e., HDL ratio which means less prone to heart disease, making the subjects profile less atherogenic, less prone to cardiovascular or cerebrovascular insult. This is a message that can be intelligently propagated among the consumers. It also reduces triglycerides and Very Low Density Lipoprotein (VLDL or bad cholesterol). Countries like Indonesia,

Philippines etc undertake commercial production of coconut flower syrup, palm sugar, honey etc from the immature coconut inflorescence. The low glycemic index of palm sugar makes it an ideal sweetener for diabetic patients. Marketing of these products can be undertaken targeting specific communities, thereby developing speciality niche markets. Normal sugar is decolorized using bone char. Palm sugar can even be promoted as a “*Vegetarian sugar*” which further increases the marketability. Marketing strategies should be adopted in accordance to the product in question, the attributes of the product, the target group of consumers and the market they cater to.

“So delicious dairy free” is coconut ice cream promoted as a dairy free ice cream in the United States. Consumers who are allergic to milk and milk products and health conscious consumers are the target group. The success of the product made them to move over to dairy free yoghurts, dairy free beverages etc. Coconut milk as a beverage and coconut milk used in place of milk in corn flakes etc brought the coconut milk to the dining table every day, thus creating a regular bulk demand for the product. The way you market, the way you place a product in the market determines its acceptability, however good the product is.



Attractive prices

Any product has a reasonable maximum price. If the price is higher than this level, the consumer will either substitute the product with another or reduce the purchase quantities. For instance, when coconut oil purchased for edible purpose turns too costly, the consumer will go in for other cheaper edible oils or will reduce the consumption of coconut oil into half the quantity. Another dangerous situation is, when prices go high, the traders adulterate coconut oil with other cheap oils. The value of product increases with the value addition undertaken in it. The price quoted should also be on par with the extent of value addition undertaken. The vital point in evolving a marketing strategy is do we want a high priced product with a niche market or a global product in wide demand across the world.

Attractive market places or outlets

A congenial, hygienic and homely atmosphere itself will attract consumers. The road side vendor selling tender coconut may not attract a great section of the customers who prefer hygienic places and do not like eating or drinking in the outside. Heaps of waste materials generated from tender coconut sale, buzzing bees etc will drive interested customer away. People don't prefer going to such outlets with family. But if the same were sold in a small outlet with a semi permanent structure, equipped with a counter, the total ambience of the tender coconut outlet changes. An entrepreneur with more investment capacity can go in for a small space with two or

three round tables and chairs which will provide the customers with space to sit and have the drink and relax. More investment will bring in much more consumers. Added services can be charged in accordance to the service paid and the customers are not going to be bothered.

Coconut Development Board is promoting the establishment of tender coconut outlets across the country in order to promote the consumption of tender coconut. More outlets along the highways



under a common design will increase the visibility of tender coconut thereby providing room for increasing the marketability. The Board is extending a support of financial assistance of 50% subject to a maximum of Rs. 1.5 lakhs.

Attractive packaging

The society is not even aware of the numerous products from coconut. Packaging has to be really attractive and catchy if the products are to be visible in a rack of similar products. The packing can include the additional features that are to

be highlighted apart from the statutory details. The packing should also suit the particular category of consumer. For instance, coconut chips will be attractive to kids, when it is marketed as a snack drink related to animation characters. The mode of packing is also important and has a specific market value. Tender coconut packed in PET bottles, tetra packs, cans etc offer different features. The acceptability of the product is in accordance with the consumer group. With each type of packaging, the investment varies, so does the shelf life of the product. Packaging should be selected in accordance with the market we aim at, the customer we target and the shelf life we require.

Mind catchy slogans and logos

Whatever the quality of the product, a good backing with a catchy commercial will make wonders in marketing. Remember Amuls slogan "*Utterly butterly delicious*". In an era when advancements in information technology is progressing at lightning pace, marketing strategy should be capitalise whatever options available, both in the print and electronic media, for marketing of the product. Slogans in advertisements can talk of the attributes health benefits or any other speciality of the product. For instance, tender coconut water was promoted as a sports drink by a multinational in the United States, while it came up as a natural energizer in the eyes of another firm. A third firm concentrated on the nourishing effect of consumption of tender coconut inviting consumers for a rehydrating holiday.

Branding

No product can establish in this globalised market without a brand name. Branding generates an identity for the product and helps in creating a loyal customer base. A branded product with good quality can get established in a better way. Getting a brand established in the market need much concerted efforts, but more efforts are essential to sustain the brand. Only a production system with good production practices in place can assure better quality of product, that too in a sustained manner. People are going in for more and more specialization in products creating different brands. Virgin coconut oil is branded with addition of ayurvedic ingredients to create a specialized market. Fractionated coconut oil is offered with more health benefits.

When we are in the process of establishing coconut farmers' societies and federations and Producer Companies, we can create a common brand for the products developed by the Producer Companies. The brand will aid in creating an identity that it is produced by the farmers directly. Brands indicating the geographical identity or place of origin like "Produce of India" will also increase the marketability in the export market.

Efficient supply chain management

Being a small farmers crop, coconut marketing is undertaken through a long supply chain with innumerable intermediaries comprising of farm gate traders, commission agents, wholesalers and retailers. The grass root level farmer realizes a very small

proportion of the Producers Share of Consumer Rupee, often as low as 30%. Efficiency in the supply chain management by reduction in the number of intermediaries itself will make marketing more remunerative to the farmer. Though coconut cultivation is occurring in more than 18 states and selected Union Territories, bulk of the production occurs in the four southern states. Coconut oil is consumed as edible oil only in Kerala and adjoining regions of Tamil Nadu. In all other areas, coconut oil is used for topical applications and as hair oil. Tender coconut, mature coconut and temple coconut are consumed in large numbers in North India. Truck loads of tender coconut are moving from the South to important supply points in the North. The traders source the coconuts at a meager price from the farmers and sell it at exorbitant rates in the consuming point. Producer Companies formed by federating the coconut farmer associations can take up the supply of coconut directly to the consuming points thereby reducing the length of the supply chain. Logistic cost can be minimized to the bar minimum by utilizing the facilities for transport of agricultural cargo like the Kairali Queen in Kerala. The farmer thus earns a greater share of the retail price.

Since the consumers come to buy food in this modern world, our marketing strategy should be to offer a wide range of food items starting from the nil processed through the minimally processed products to the semi and processed products. Quality, product, packing, price, promotion and market influence the marketability of a product. We have to picturise coconut and coconut products in a

Each Malaysian consume 15 kg of coconut a year

A study conducted by the Federal Agriculture Marketing Authority (Fama) showed that each Malaysian consume 15 kg of coconut a year. According to Ahmad Ishak, Director-General 700 million coconuts are consumed per year while Malaysia's annual production was only 400 million coconuts. "So, we have to import the rest to ensure enough supply of coconuts for domestic consumption including during the fasting month and festive seasons," Usually during every month, Fama imports one million coconut but during Ramadan and the festive season, the import would increase to three million nuts.

(<http://www.bernama.com>)

different angle. In marketing, a slogan that says that coconut oil has the following beneficial attributes to health has a greater impact than a slogan denying the ill health factors.

In this globalised world where free trade agreements are making the economy and our products more and more exposed to the open market, coconut and its products will be able to establish in the market only by adopting a different approach. For this we have to think differently, have the urge to try out new ideas and the commitment to follow the ideas and put them in place. We should have a mind which dreams and an effort to achieve those dreams. There are three categories of victorious people in the world – those who succeed in life, those who achieve in life and those who create history. Let us strive forward to create history.

Marketing Officer, CDB, Kochi-11



Natural drinks in the natural way

Vijayakumar Hallikery

‘Eat your food as your medicine otherwise you have to eat medicine as your food’. This slogan conveys what Girish Chowdappa Taladummanahalli (27) has in mind. Girish, hailing from a traditional coconut growing family has a sentimental attachment to coconut. He was fascinated by the richness of coconut for its health attributes, medicinal qualities, culinary qualities, multifaceted uses as a health drink, natural drink and what not. He dreamt high that he wanted 10,000 retail tender coconut kiosks in different parts of the country. He started putting his dream into action and that is ‘Naturest’. He is materializing his dream taking one step at a time and in a year he has 5 kiosks and 4 retail outlets functioning successfully.

Girish, a native of Chikkaballapur dist, is a post graduate with over 8 years of experience in sales, marketing and retail industry. Naturest is his dream made true of having the

largest private Indian retail entity in natural and healthy food and beverage industry. It took more than year for the conceptualised idea of natural drink to turn into reality.

Nature Drink Retail (India) Pvt. Ltd., is a company that envisions a healthy lifestyle and aims to provide a good retail platform for farmers who produce tender coconut and provide natural treatment (medicine) for all kind of minor ailments. The company is offering a natural drink that can avoid excess of heat, acidity, gastric problems, headache, fever, cold, cough, tiredness, stomach pain etc., This drink can also be taken as just a refreshment drink.

The company is providing employment opportunity for those who wish to make a career in retail industry. He has with him a team who come from different ethnic and professional background, who bring diversity to this business and strong organisational support along with

expertise in various management areas and scope for expansion into other retail streams.

According to Girish Chowdappa in a country like India, with a population of about 110 billion offers vast scope for marketing nature drink as the entire population including the infants would be the potential customers. He foresees that the naturalness of the product and the abundant health benefits the product offers will accelerate the demand in tune with the growing population. Eventhough tender coconut water is widely consumed the lack of flavor and the traditional way of serving keeps people away from this wonderful drink.

Nature drink brand of coconut water is served with hygiene, comfort and ambience. The product is available in 25 flavors catering to the different customer needs. Girish Chowdappa’s mission is to create natural food and beverages brand in Indian market, to help people to

naturally prevent their health diseases and to create brand new land marks in India.

Girish is now bringing coconuts, fruits and vegetables from Karnataka, Kerala, Tamilnadu, Goa and other neighbouring areas. He has designed an electrically operated and patent registered special featured machine to open and cut coconut. The company is using freezers in all their kiosks to keep tender coconuts, fruits and vegetables fresh. The company ensures that the place of kiosks, machinery and all other things conform to hygiene and health standards.

'Nature Nest' fresh tender coconut water is available in mint, ginger, cardamom, jeera, lemon, wheatgrass, tulasi, orange, peach and sugar candy flavours. The product is available at residential cum commercial areas, IT parks, tech parks, shopping malls, hospitals, airports, railway stations, bus stations, amusement parks, multiplex theatres, school-college campuses, and SEZ's. The company does have corporate tie-ups with retail chains in India like Future Group through its Big Bazaars, Total Malls, Reliance Malls, and Metro Cash and Carry. Presently five kiosks are functioning in Big Bazaars and the company is planning to open 25 kiosks in Bangalore. Fresh fruit salads, vegetable salads (fresh and boiled), vegetable sprouts (fresh and boiled), vegetable soups (hot and cold), natural ice creams like, fruit, coconut and vegetable ice creams, and Nature Nest's special Hareera along with flavoured fresh tender coconut water are available in these outlets. 70% of his targeted markets are corporate sectors.

Girish Chowdappa purchase raw materials directly from the



farmers thus ensuring a remunerative price to the farmer. His intention is to give natural and quality drink with a different taste suiting to the customer's choice. Since he has already entrenched his products in the market, he is looking for further expansion on a larger scale.

Nature drink retail (India) Pvt. Ltd caters to the health and beauty consciousness of the people by adding natural foods and beverages instead of junk foods an artificial soft drinks to their daily diet. As there are no established players in this segment, the company is trying to establish themselves as the market leaders.

Girish Chowdappa has adapted the sales strategy of targeting each and every human being with different types of products for different group of people and thus trying to make the product's presence everywhere. He is planning to install machines developed by himself for punching and cutting the tender coconut at all the 'Nature Drink' kiosks. He is also planning to introduce the Dabbawalla concept at all of Nature Nest corporate outlets so as everything can done instantly at the

outlets and kiosks thus retaining freshness and naturalness of the product. He is planning to export his products to Srilanka, Malaysia, Thailand, Indonesia, Singapore, USA, UK, UAE, Australia, Canada and African countries.

Nature drink retail (India) Pvt. Ltd, India's largest retail entity in Natural Food and Beverages segment, is on its way forward for providing a permanent and largest retail market for the Indian farmers thereby assuring a valuable, profitable and regular income for their raw material and at the same time creating employment opportunities for the people looking to make a career in the food and beverages and retail industry.

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(Deputy Director, CDB, RO, Bangalore)



Thengu Mane- a treat to the palette

Vijayakumar Hallikeri & G.M. Siddarameswara Swamy

Calling itself India's first coconut pub for the health-conscious, Thengu Mane located at Rajaji Nagar, Bangalore provides coconut lovers with a range of coconut items' starting from tender coconut water to delicious coconut ice-creams. The mantra of the coconut pub is nutrition. Whether it is coconut flavoured ice-cream, soufflé, jelly, burfi, shakes and lassi, and even pani puri, all prepared from organic products are available at Thengu Mane. Even the copra chips and coconut rolls make nutritious snacks here. Conceptualised by M Vinod and N K Anita, a couple from Rajajinagar, Bangalore. Thengu Mane offers coconut in every conceivable form. The water is removed from the nut, with the aid of a machine, which is designed by Vinod himself and comes with an innovative cooling system. Vinod knows that Bangaloreans are not just fashionable, but extremely health conscious.

Immediately after his graduation, Vinod sailed through his ambition of providing people with

fresh and hygienic coconut water along with a range of coconut products which they may not have tasted before. His objective is to deliver the major products of coconut at a reasonable price to the consumer and to provide the farmer with a reasonable price for his produce. Coconut apple locally known as Goobu is one such product. Coconut apple is the kernel of sprouted coconut, a very common product to coconut

jelly, coconut apple, coconut apple shake, coconut burfis, coconut holige, coconut roll, coconut finger chips, coconut pani puri, fresh grated coconut powder, desiccated coconut powder, coconut milk powder, etc. made in Thengu mane are available to coconut lovers. Chilled fresh tender coconut water is served in glass by cutting the fresh tender nut from a specially designed machine.

Vinod has also designed a



growers, but a rare item for those who have not seen it. Varieties of items like chilled fresh coconut water, tender coconut lassi, coconut ice cream in various flavours, coconut soufflé, coconut

machine to cut open the coconut apple from the sprouted coconut. He has also designed a tender coconut opener which is in great demand. Further, he developed coconut apple shake from coconut

apple. Two to three month sprouted coconut is ideal for edible purposes and provides better taste. According to Mr. Vinod one coconut apple costs Rs.20/-.

Vinod's wife Anitha a housewife is an expert in preparation of coconut milk ice cream and coconut soufflé. In order to make their coconut products more popular, the couple frequently participates in exhibitions and fairs. The response they receive from the consumers are overwhelming and the products are getting innumerable enquires for the product. The taste and quality of the products are appreciated by all.

Mr. Naveen Kumar S.N, Executive (Marketing), Café Coffee Day who tasted the products once, opines that "I appreciate the taste of the natural products. The place is very hygienic and exclusive". Veeresh Kumar, a regular at the place, says, "I really appreciate this place as it is truly one-of-its-kind. I strongly recommend the 'Cardamom ice-cream'. The place as such is very hygienic and I come here almost every alternate day. This makes Thengu Mane really exciting. It introduces a coconut lover to a range of products that are a treat to the palette.

Thengu Mane, Kissan Agri Products, #387, 19th Main , 1st Block, Rajajinagar, Bangalore-560 010, Phone 080 2332 8875, 99725 56749, email: thengumane@gmail.com

Deputy Director & Senior Technical Officer, CDB., RO., Bangalore

Coconut water crowned excellent sports drink



Coconut water known as Mother Nature's own sports drink is confirmed again as excellent sports drink. Chhandashri Bhattacharya, Ph.D, who conducted a scientific analysis of coconut water opines that coconut water is a natural drink that has everything that an average sports drink has and more. "Whenever you get cramps in your muscles, potassium will help you to get rid of the cramps. It's a healthy drink that replenishes the nutrients that your body has lost during a moderate workout," she stated.

The typical American diet is low in potassium and high in sodium, which is found in table salt. Another research has shown that such an imbalance is unhealthy. In one study, people who ate foods low in potassium and high in sodium had twice the risk of death from heart disease and a 50 percent higher risk of death from all causes. Other analyses indicate that a 12-ounce serving of coconut water has more potassium than a banana. It has

high in healthful antioxidants, added Bhattacharya, who is with Indiana University Southeast in New Albany.

Bhattacharya's team analyzed coconut water, Gatorade and Powerade and found that coconut water contained up to 1,500 mg/liter of potassium, compared to up to 300 mg/liter for Powerade and Gatorade. Coconut water, however, had 400 mg/liter of sodium. It had comparable quantities of magnesium and carbohydrates as the other drinks. Coconut water's lower sodium content is where it fails as a good sports drink for people who engage in strenuous exercise that produces a lot of sweating, Bhattacharya said.

Chhandashri Bhattacharya presented her findings at the 244th National Meeting and Exposition of the American Chemical Society (ACS), the world's largest scientific society.

Source: <http://in.news.yahoo.com>

Tranquebar Whiskey from Coconut Milk

Sasikumar C



The history

A fascination for science and a determined urge to follow the reasons behind science was the leading light for Mr. Aditya Sundara Padya Raj that led to his discovery of Whiskey from coconut. This youth hailing from a farmer family from Parayar in Nagapattinam District in Tamil Nadu belongs to the traditional toddy tapping community. His family migrated to Kerala before independence and had distilleries at Devikulam and Pallivasal in Kerala. Later on, in 1984 they moved to Porayar near to Karikal in Pondicherry UT.

Disciplined research and follow up

Pandya Raj's fascination for coconut started during his school days itself. He had a never ending quest for knowledge and never accepts anything unless and until he gets satisfied with valid reasons. His research in coconut whiskey started in 1998, while he was doing plus two. He was supported in his research by his chemistry teacher Mr. Vasegaran Williams. Toddy tapped from coconut and the coconut based products formed the very basis of his research. He carried out an intensified research for four years to find out the possibility of manufacturing an alcoholic beverage from coconut. The final product derived from research was of whiskey quality. It was finalised as coconut whisky and patent was filed in the year 2003. The quality and alcoholic content of the product was analysed and certified by the MICAL (The Chennai Industrial Co-operative Analytical Laboratory Ltd., No/IND 686. GUINDY, CHENNAI – 600032.)

The Christening

In 2004, he offered the samples of the product to his associate and friend, Mr. Bent Christine, an engineer from Denmark. He was the chairperson of the Tranquebar Association, an outfit of Danish people in Tranquebar. The whiskey made from coconut was given to Mr. Bent Christine and his guests. They tasted the whiskey and were highly impressed by the taste and quality of the product. The christening of the product occurred then and there as TRANQUEBAR COCONUT WHISKY.

The Honours

His efforts did not go without a reward. In the year 2006, the patent right of the product was accepted and granted by the International Patent Office, Vienna. In continuation of development of the product, he presented the research paper on coconut whiskey at the General Body meeting of the Coconut Growers Association, Palladam, Tiruppur District in the year 2008. There was an overwhelming response for the product and its process. The coconut growers were greatly impressed and were encouraged by the wonders that this revelation could do for them. In 2010, the Nadar Mahajana Sangam honoured him with the Young Achiever Award. The research efforts also attracted the attention of the media since this was a novel approach to the coconut crop, though toddy was a well known product. The media in Tamilnadu, especially leading journals like Nakkeeran and Pasumai Vikatan appreciated his research findings on coconut whiskey.

In 2011, he received the accolades and appreciation for his product from Thiru. K.A. Sengottaiyan, the Honourable Minister for Agriculture in Tamil Nadu and supported by a big farmer group at Vellakoil, Tiruppur District. These encouragements made him to venture into commercial manufacturing of coconut whiskey either on his own or under business partnership.

The methodology and the product

Mr Aditya acclaims that his product Tranquebar coconut whiskey is coconut based pure whiskey and it is a best value added product from coconut. He is confident that the product will definitely widen the industrial use of this multipurpose crop and will bring in newer horizons for the crop. Tranquebar coconut whiskey's maturation takes 6 months similar to Owl

(Continued on next page...)



ILA-Coconut Soda

Mridula K

Wonders can be made from coconut, the wonder fruit of Kalpavriksha. Ila Coconut soda is such a wonderful drink made from coconut water. When the price of coconut is falling day by day and the farmers are not getting a fair price for their crop, diverging to value addition is the best alternative to make better prospects

from this crop. If the farmers can change their stereo typed attitude and think differently like Shri Sasikumar from Kozhikode district in Kerala, different products of coconut shall be introduced in the market.

The Concept

Shri Sasikumar has introduced the product in 2009 under the name **ILA-coconut drink** in Kozhikode markets. The raw materials are collected from the nearby copra making units. He is using his own technology which includes filtering of coconut water, boiling, chilling, sterilizing, carbonating and then finally bottling. He is making 600 bottles per day with 300-400 liters of coconut water. The expenditure for making 600 bottles per day is Rs. 2500/-. The product is packed in 200 ml and 500 ml bottles which is sold @ Rs. 10/ and Rs. 25/ respectively. The products are supplied in Kozhikode city in cool bars and bakeries. The product is also available in Kochi.

The shelf life of coconut soda is three months without refrigerated condition and without exposure to light. The quality test of the product was done at CFTRI, Mysore and also at the Technology Development Center of Coconut Development Board.

(Continuation from the previous page...)

distillery's Owl whisky, which is shorter than Scotch whisky's maturation period.

The dreams

Mr. Aditya is very optimistic about his product. He foresees a revolution in the industrial demand for coconut. The product has market potential in the global market and he expects a boost in the economy. The

The unit is a licensed one and complies with quality certifications. Shri. Sasikumar is having a partner Shri. Sajit and he is availing the assistance of 10 women of Kudubashree units in running the unit.

Future Plans

He is planning to make his unit semiautomatic. He has approached several financial institutions and Coconut Development Board for financial assistance. Ernakulam Marketing Group and Malappuram Marketing group have already placed export orders. He has applied for railway pantry license for supplying Ila Coconut Soda in railway canteens. He is also getting product queries from the neighbouring states, mainly from Tamilnadu.

Shri SasiKumar's advice to the newly formed Coconut Producer's Societies is to change their attitude. Instead of sticking on to copra and coconut oil, they must venture into product diversification, value addition and by product utilization for making better revenue from this crop. He shares this experience in the ongoing leadership training for the CPS leaders at Kozhikode. His example is instrumental in making a change in the mindset of the coconut farmers.

(Technical Officer, CDB, Kochi-11)

use of coconut are getting diversified each day with products emerging in almost every category like snacks, drinks, beverages, ice creams, sugar etc apart from the traditional products. The crop is indeed a wonder crop and man has just scraped the tip of the iceberg with many more products to come out.

(Technical Officer, CDB, Kochi-11)



Virgin coconut oil is not a medicine, but a functional food

Coconut oil and virgin coconut oil have a significant role to play in a well-balanced, nutritious diet. Abandoning unhealthy lifestyles and reverting to natural foods can help to reverse many of the diseases that have manifested in our bodies through our highly refined diet.

Research shows that replacing other cooking oils with virgin coconut oil generally creates a more favorable HDL/LDL ratio. This oil has antiviral, antibacterial, antimicrobial and antiprotozoal properties and like all the whole foods, contains nutrients for a healthy food. Apart from coconut oil, the only other source of lauric acid found in such high concentrations in mother's milk. Tropical oils and mother's milk are by far the richest food sources of medium chain fatty acids available. The closest other source of these vital building blocks of immune system are the milk fat and butter, comprising around 3% of its content than any other vegetable oil which is completely deficient in these MCFAs.

The company

Mahavir Coconut Industries, the leading and reputed company was promoted by LAL & MALL group during the year 1983 for the manufacture of 'MANGAL' Brand desiccated coconut powder. Today the group is the largest manufacturer of desiccated coconut powder in the country. The

production capacity of both the unit is about 6000 M.T per annum.

The product

MAXCARE brand virgin coconut oil, a product of Mahavir Coconut Industries is the healthiest and most versatile dietary oil. The processing of VCO is developed by Mr. Anil Porwal, Director after his continuous endless efforts and in house research and development.

MAXCARE virgin coconut oil



is hygienically made from fresh mature coconut kernel by cold pressing. The extracted coconut milk is centrifuged using a unique method to obtain 100% pure natural virgin coconut oil without the use of heat. MAX CARE virgin coconut oil contains no preservatives, is chemical free, non hydrogenated, unrefined, unbleached and non deodorized. The VCO produced by this unique method is of pharmaceutical grade with a very low moisture content which gives longest shelf life of

more than one year. This VCO is very light and mild having a clean taste and aroma.

The hurdles

The manufacturers of virgin coconut oil are facing many problems in the marketing of virgin coconut oil. The consumers are aware of coconut oil but are misled by the myth created over coconut oil that is bad for health. Even the medical fraternity advises the patients to avoid the use of coconut and coconut oil. Unstinted and concerted efforts are essential to weed out this myth.

Doctors, dieticians and consumers must be educated with facts, figures, scientific reports, and clinical reports on the positive effects of coconut oil. By adopting aggressive awareness campaign, a potential sound market can be established for virgin coconut oil. Once the demand increases there will be large scale production of virgin coconut oil and the increased output will lead to reduction of cost of production and the benefit will be passed on to the consumers by way of reduction in selling price. Unavailability of organic certified coconut is another problem faced by the virgin coconut oil manufacturers.

It was under this background that Mahavir Coconut Industries entered into the manufacturing and marketing of virgin coconut oil in

2001. Initially it was a very big challenge and very difficult task to promote virgin coconut oil in a market ruled by olive oil and other oils. Anil Porwal put a lots of effort and time in developing suitable marketing strategies to promote virgin coconut oil. He himself worked to develop the marketing strategies for the product.

Branding and packaging

The product was launched under the brand name MAXCARE. The product was then packed in attractive food grade pet bottles which is well accepted in the market. Good quality packing materials with proper cushioning is selected to pack and despatch the product to the consumers and distributors.



Marketing

Keeping in mind the high end and educated consumers who would buy online using credit card and net banking facilities, a web site is created with the details of the product and manufacturer. In the same web site shopping link is given so that the person who visits the web site can click on shopping link

and buy the product using the credit card and net banking facility.

For the tech savvy consumers Mahavir has advertised in Google. A product page is created on facebook and tweeter with lots of information for the benefit of consumers. The company is also regularly participating in trade shows, exhibitions, conferences, seminars and meetings. Advertisements are regularly given in various news papers and



Anil Porwal receiving the national award of CDB from Shri. Sharad Pawar

magazines on periodical basis. The company has appointed many reputed and sole distributors for promoting the sale of Maxcare Virgin coconut oil. Many reputed manufacturers of hair oil and medicated hair tonic are making bulk purchase from Mahavir.

Recognitions

The company acknowledge with proud Mr. Anil Porwal's unique skill of innovation and research. Single headedly he has designed developed implemented and successfully executed the marketing strategies to promote and make MAXCARE virgin coconut oil one of the world

class, best quality brand of India . Mr. Anil Porwal is a recipient of the national award of Coconut Development Board for the Best Research work for developing fastest coconut de-shelling machine. The entire desiccated coconut industry is using his de-shelling machine. He has also developed a coconut skin paring machine with which entire coconut white ball can be made after pairing. The fine tuning of the

pairing machine is under process.

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Prospects of market development for non-traditional value added coconut products in & around National Capital

(Kumaravel S¹, G.R. Singh², Ravi Prakash³ & Jayakumar S⁴)

Coconut, the Kalpavriksha is known for its great versatility as seen in many domestic, commercial and industrial uses of its different parts and it forms the most important source of food and nutrition for millions of families spread across the wet tropical low lands of the world. Indonesia, India and Philippines possess the first three positions in terms of coconut production with 16,498, 15,730 and 15,668 million nuts, respectively, contributing about 74 % of world coconut production (Table 1).

Though India is one of the leading coconut producers at the global level, the coconut cultivation and usage is not similar in all parts of the country due to diverse culture. All through the country, mature coconuts and edible copra is used for religious purposes. Coconut is used for the production of coconut oil for edible use in the Southern states of Kerala and Tamilnadu. In the other parts of the

country, coconut oil is used for topical applications, as hair oil and in toiletries. About 50% of the coconut produced in the country is used as such for culinary and religious purposes. About 35% goes in for the production of copra and 15% is consumed as tender coconut. Though coconut has multifarious uses, there are only a handful of products manufactured on a commercial scale by processing units. Dessicated coconut is an important product from coconut widely used in non-coconut growing States in different dessert preparations and in bakeries. Though tender coconut is consumed raw, processed and packaged tender coconut units are not common.

CDB conducts campaigns for creating awareness about the health and nutritional benefits of coconut and varied uses of coconut & versatile value added/ convenient products made from coconut. This

propaganda will prove instrumental in popularising coconut among the consumers in the non traditional states.

Entrepreneurship development in coconut has been promoted by the Board and financial assistance is provided to interested entrepreneurs at the rate of 25% assistance. Many manufacturing units have been established undertaking production of value added products like packed tender coconut water, desiccated coconut powder, coconut vinegar, coconut chips, jam and other coconut based food products apart from non-food products made from coir, shell, etc. The overall progress of the coconut industry in India during the past 20 years is noteworthy with various developmental activities and initiatives taken by CDB, Government of India and State Governments of major coconut growing States and active involvement and enthusiasm of the progressive farmers and entrepreneurs.

As in the case of other agricultural commodities, the extent of processing in coconut in the country is negligible. In comparison to other major coconut producing countries like Indonesia, Phillipines and Srilanka, India's export of food products from coconut is meagre. Even countries like Malaysia with less plantations are exporting significant quantities of processed products from coconut. It is high tiem that we venture into production of more value added products from coconut.



From the producer's point of view, the cost of cultivation has increased due to increased cost of inputs like fertilisers, labour, etc. On the economic sides, with decreasing productivity and prices, the returns are not remunerative. The main factor in case of coconut is that a major portion is mainly consumed as tender coconut, raw matured coconut and coconut oil. Coconuts when supplied for manufacturing value added products like packed tender coconut water, virgin coconut oil, coconut milk, milk powder, desiccated coconut, nata de coco, etc. fetch higher prices to the farming community. Higher remunerations encourage the farmer for intensive cultivation of the crop in an extended area, which enhances the productivity as well as the production. On the other hand, the enhanced production would ensure regular supply of raw materials to the manufacturers and they can upscale their activities to either product diversification or increased production.

Though the manufacturing units of major coconut products are habited in Southern part of the country, the north Indian urban packets always serve as major domestic markets. Delhi, the Capital of the country, is one of the fast growing cosmopolitan cities in the north India. The National Capital Territory (NCT) of Delhi has 9 Districts and the National Capital Region (NCR) encompasses a total area of 30,242 km². shared by NCT Delhi (1,483 km²), Uttar Pradesh (10,853 km²; Meerut, Ghaziabad & Bulandshahar), Haryana (1,3343 km²; Panipat, Faridabad, Gurgaon, Sonapat, Rewari & Rohtak) and Rajasthan (4,493 km²; Alwar). As regards the population of the region, it was 3.70 crore in 2001 and the

projected population of the region by the year 2021 will be 6.96 crore. Of the total population, 2.06 crore million (55.55 per cent) are urban while the remaining 16.45 million are rural. The Class-I towns (17) accommodate 91 per cent of the total urban population of the Region (Source: Report of the Study Group on NCR policy zones, demographic profile and settlement pattern, National Capital Region Planning Board, New Delhi, December 2001)

The purchasing power of Delhi population is much higher than the national average. The territory houses population from all across the country migrated and settled here for generations, thus having varied cultures. Further, this serves as a hub/ passway for many north Indian States/ cities like, Punjab, Haryana, Chandigarh, Uttarakhand, Jammu & Kashmir, Himachal Pradesh, parts of Uttar Pradesh, Rajasthan.

A preliminary survey conducted in Delhi and NCR during February to April 2012 for first-hand information on the marketing potential for different value added products derived from coconut indicate several opportunities as well as threats for the manufacturers/ marketers/policy makers in India.

Packed tender coconut water:

Three popular brands of tender coconut water packed in polypropylene containers are available sparsely in Delhi markets @ Rs.22-30 per 200 ml. However, the availability is nil in case of shopping malls, except one. The product has very high demand potential which is evident that the stockists/ traders expressed their concern about the irregular and inadequate supply from the

manufacturers. Though the people in NCR appreciate the nutraceutical benefits of tender coconut, the packed TCW is less known to them. Even the traders in few elite localities are not aware of the product.



It was also found that this product finds a mention in the diet menu of patients in reputed hospitals and the stockists also confirmed regular supply of packed TCW to few reputed hospitals in NCR. The convenience, time savingness and space requirement of packed TCW vis-à-vis fresh tender coconut would attract the consumers towards the packed TCW, which also eases the waste disposal from households. Imported product containing packed TCW with pulp from Indonesia was also found in a chain of retail market. The increasing population in NCR, high tourist turnout, scorching summer would add the demand further for this product.

Desiccated coconut powder: The major share of the arrival is from Tumkur region of Karnataka supplemented considerably from



Erode area of Tamil Nadu. The main wholesale market for desiccated coconut is Kari Baoli Market near Red Fort, where different brands of DC with varied fat contents in varied granule sizes to suit the need of health conscious people as well as the bakers. The product is widely available in grocery shops as DC is commonly used by North Indian flocks in burfi, laddoo and kheer preparations for taste & flavour. However, there are no consumer packages of small quantities available in retail markets, except a few in modern shopping malls. Small consumer packages of Delhi made DC was also observed, which might have been repacked out of bulk supply down from South.

Coconut milk/ cream: Indian brand of coconut milk is found only in south indian run stores that too scantily, which has a very little consumers. An array of coconut

about the product coupled with the usage is the prime reasons for less demand for these products. Potential for these products are abundant in hotel/ catering sector.

Coconut Milk Powder: This is a viable product for marketing in Delhi and NCR. The Indian as well as foreign brands are available in malls and south indian stores. The south indian population and the hoteliers are the current customers. However, if popularised among the Delhites about the usage in different preparations like kheer, curries, etc. the product would invite more customers.

Nata-de-coco: Philippines made fruit cocktail containing coconut gel (nata de coco) is placed for sale in few malls. Other brands are also marketed in limited places. However, the shopkeepers informed that they are seldom sold.

chinese food items wherein vinegar is an important ingredient, can be very much harvested to include coconut vinegar in the market mix of vinegars in Delhi & NCR.

Coconut chips: Retail general/ grocery stores, whether small or big, whether in hitech cities or remote villages, it is quite common that snacks pouches hang everywhere. It may be a local made or popular brand roasted groundnut, chips, mixtures, other fries which is a favourite for all age groups for timepass or for inter-lunch snack. However, no coconut chips are found in any shop. It is a daily scene in Delhi and other north Indian cities that matured fresh coconut kernel cut in to pieces is sold in almost all traffic signals just like a time pass snack along with other packed snacks. Further edible copra cut into pieces form part of 'Prasad' offered in worship places. This reveals that eating matured coconut/ copra is not a new thing in these areas, which the coconut chips manufacturers can reap.

Steps to go ahead:

For better popularity and awareness about these value added coconut products which have higher potential of marketing in Delhi and adjoining regions the following steps may be explored.

The manufacturers may go for Brand promotion in Delhi and major cities adjoining, participate in different national & international fairs & exhibitions organised in these areas. The Board's financial assistances for advertising and participation in major fairs may very well be utilised by these manufacturers for popularising their product as well its brand and for identification of marketers. The



milk/ cream imported from countries like Thailand, Indonesia, Malaysia, Nepal, Sri Lanka, etc. hit the racks in many of the malls in NCR, however the Floor Managers expressed that they are seldom demanded due to limited usage by consumers. The non-awareness

Vinegar: Apart from synthetic vinegars, vinegars prepared from fruits like apple, etc. are imported from other countries and showcased for sale in the malls. However, the coconut vinegar could not find a place along with them. The passion of the youngsters over

manufacturers may also enhance their production capacity with the assistance of CDB's schemes for saturating atleast the current demands of the market, as the distributors/ traders are not getting the required quantities of products from the manufacturers.

The existing network of outlets of NAFED, Kendriya Bhandar, Safal, State Agricultural Marketing Boards and other private chain of retail sales may be appraised about these products. Systematic and proactive service like regular supply of agreed quantities of products by the manufacturers to the distributors/ dealers/ traders will increase the demand for these products. The Board's intervention in this area would be of great significance till these products have established markets in northern States. Buyers-Sellers meet may be convened at regular intervals in different cities in the northern States.

At the same time, the awareness about these products, their health & nutritional benefits, convenience in handling, etc. are to be enhanced. The misconception prevailing among the consumers about the preservatives used in these products & their health hazards have to be clarified. As coconut is not a regular culinary item in northern States, the coconut recipes are to be popularised. These can be achieved by rigorous awareness campaigns through advertisements, TV shows, etc. The social network websites will complement to a greater extent in this regard.

Convenient retail new technology packaging attracting different categories of users like children, school/college going youth

and adults would certainly add the marketing value of the products where similar products are available in competitive prices. Improving the quality standards of the products, packaging, labelling, organic certification, etc. would increase consumption markedly. The accreditation for maintenance of quality standards and the functioning of the manufacturing units have significant credibility for choosing their product(s) by the consumers.

Possible models of Public Private Partnership, involvement of NGOs/ communities like SHGs, convergence with similar government schemes in production, distribution and awareness creation of coconut products may be explored and encouraged for wide adoption.

The Board may take necessary steps for establishment of new firms manufacturing these products and upscaling the production of existing units to cater the prevailing requirements and demand potential these products have. The import of foreign products is to be monitored regularly and caps may be imposed as and when need arises.

Researches on compounding different product lines catering to special tastes and requirements by different consumers (sports persons/ patients/ children, etc) in different parts of the country would benefit the coconut industry. Efforts for bringing down the production cost and thereby the MRP of the marketable products would help the products to compete successfully with parallel range of products.

So far no authentic survey on the demand and supply of these products in northern part of the country has been conducted. The

Board may undertake a comprehensive survey for collection of scientific data on actual supply, availability & demand for coconut products in Delhi and NCR to help in planning by the Board for strategies of coconut production and marketing. The study may also include assessment of awareness about coconut products among the consumers, traders and other people related with the industry so that wide market network could be established. The survey may also assess the systems of marketing of coconut products in Delhi and NCR with reference to arrival, prices, price spread and marketing efficiency; analyse and estimate the market demand potentials and factors affecting the demand of coconut products; analyse the perception of users and potential customers towards marketing mix of coconut products; and identify the problems impinging on the marketing of coconut and coconut products in Delhi and NCR and suggest workable solutions for betterment of the entire coconut industry.

In a nutshell, the increasing the awareness on different value added non-traditional coconut products and increasing their production are the urgent needs for successful entry and sustainable marketing of these products in the non-coconut growing States in North India. The studies on market analysis, inventing newer products, improving the quality standards would ascertain a prosperous future for the value added products made from the 'Kalpavriksha'.

1. Technical Officer, 2. Dy. Director, 3. Field Officer, CDB, MDIC, Delhi; 4. Registrar, Protection of Plant Varieties and Farmers' Rights Authority, Delhi

Unlocking the potential of Nature's Super Market- the Coconut

M.A. Salam*, Alvira D'Souza** & Mridula K***

Among the oilseed palm trees, coconut palm hardly needs any emphasis on its multi-utility significance. The economic importance of this tree crop is evident from the fact that it is grown in more than 90 countries across the world producing about 10.52 million tones of copra. Even though India is the 3rd largest coconut growing country in the world, its contribution towards international market is negligible.

Preface

The Andaman and Nicobar (A&N) Islands also known as the **Island of Marigold Sun** has the longest history of coconut cultivation possibly only next to Kerala state in the country. The total area under coconut in Andaman and Nicobar Islands is about 21,800 hectares with a production of 105 million nuts.

In Nicobar district coconut is cultivated in about 9090 ha. It is mostly grown as a self-propagating crop rather than planned plantation. Coconut is an integral part of the day-to-day life of the tribes of Car Nicobar. It is learnt that coconuts were bartered with foreign ships since the 7th century in exchange of cereals, pulses, iron and steel implements. The Nicobar district has coconut plantation owned by integral head of the community known as Chief or Captain. The Tsunami of 2004 destructed the Island very badly especially the Nicobar groups of Islands and this has drastically reduced the area under coconut.

Age-old practice of copra and virgin coconut oil production

Post harvest processing of coconuts in A&N Islands is confined to primary processing of copra and manufacturing of coconut oil by using traditional tribal techniques. Copra is manufactured on home scale basis with sun-drying and with local drying during the rainy season. Apart from copra making the tribals especially Nicobarese produce coconut oil using traditional method. The scrapped coconut kernel is squeezed and the milk is boiled to obtain the oil or milk or the milk is

mixed with water and kept in vessels in sunlight and the oil is then separated. Pure virgin coconut oil is mainly used for toiletry purposes. The major socio-economic feature of this plantation crop is that it is predominantly cultivated in small and marginal holdings with medium resource to poor farm environment having less marketable surplus.



Retention at Farm Level

Farmers are not selling their entire produce in the market. A portion of their produce is kept apart for seeds, household purposes and for paying the climbers wage. The quantity of coconut converted to copra for milling purpose varies from Island to Island depending upon the consumption pattern of coconut and its products. It may be 80% in these islands where coconuts are exclusively harvested for conversion to copra for extraction of coconut oil.

Storage

The storage practice for matured coconut differs from place to place. The coconut farmers store coconuts in their houses. In markets, coconuts are stored in godowns owned by the commission agents. Since matured coconuts are meant for immediate consumption or crushing for oil, they are not warehoused for longer period. The matured coconuts meant for copra making, are stored as unhusked nuts

Name of agency	Particulars	2008	2009	2010	2011	2012 (upto July)
ANCOFED	Qty. (in Qtl.)	2153.88	22948.54	28624.28	3276.48	21907.37
	Value (per qtl)	3660	4450	4450	4525	5100
EHL	Qty. (in Qtl.)	2365.82	18459.34	15635.24	-	3910.70
	In value per qtl)	3660	4450	4450	-	5100
TDCS	Qty. (in Qtl.)	700.43	8902.48	17910.67	-	-
	Value (per qtl)	3660	4450	4450	-	-

Table-I: Purchase of copra (quantity and value) under minimum support price from 2008 to 2012.

immediately after harvesting, and undergo further ripening to improve the copra quality.

Marketing of Copra

In this UT, normally cultivators are not making copra. They sell the coconut. However, in Nicobar District, the plantations are owned by the tribals and the captain of the village makes copra and sell to the tribal societies, which is exported to the mainland. Approximately, 46% of the total production of coconut is converted into copra in Nicobar, 35% in North and Middle Andaman and 35% of total production of coconut is converted into copra in South Andaman. Ball Copra is not produced in this U.T. The estimated annual production of copra (milling) in Andaman and Nicobar Islands is around 9000 MT.

In this UT of Andaman and Nicobar Island National Agricultural Co-operative Marketing Federation (NAFED) has been entrusted with the procurement

of copra of the Islands under the Minimum Support Price fixed by the Ministry of Agriculture. The purchases are effected through local designated agencies like A&N Co-operative supply and marketing Federation Ltd. (ANCOFED)- authorized implementing agency for price support policy for South, North, Middle, Little Andaman and Campbell Bay; Ellon Hinengo Ltd. (EHL) for Carnicobar and Tribal Development Co-operative Society (TDCS) for Nancowry group of Islands. (There is no APMC market in this UT for free sale of Copra). The copra produced is purchased directly by the agencies like ANCOFED, EHL, and TDCS. (Table-I &II)

Copra is procured from farmers from different places like Campbell Bay (Little Nicobar), Hut Bay (Dugong creek), Neil islands, Havelock, Kalapahad etc. These places are cut off by the sea and the copra is transported by Pantoon, Canoe, Dinghi and other

Name of agency	Particulars	2008	2009	2010	2011	2012 (Jan. 2012- March 2012)
ANCOFED	Qty. in Qtl.	982.65	840.65	-	1153.43	425.78
	Value(/qtl)	2465	2472	-	4490	3523
EHL	Qty. in Qtl.	10184.66	13243.15	-	13806.30	8577.50 (upto May 2012)
	Value(/qtl)	3064	3889	-	6557	2766
TDCS	Qty. in Qtl.	-	-	-	8254	4250
	Value(/qtl)	-	-	-	4000	3600

Table-II: Purchase of copra (quantity and value) under commercial operations during 2008 to 2012.

water transport for which the farmers/agents are shouldering the expenditures due to multiple handling.

The scheme of procurement of raw coconut is not implemented in this UT. Government of India, in 2008 for the first time announced Minimum support price for de-husked coconut @ 988/-per quintal and it is being implemented in Kerala. This UT has recommended the Commission of Agriculture Costs and Prices (CACP) to consider the possibility of effecting direct purchase of dehusked mature coconut from the farmers under PSS. As most of the farmers are not having infrastructure for converting coconut into copra they are selling the dehusked nuts directly to traders. Therefore extending MSP for dehusked nut will benefit maximum farmers and will also account for more value addition.

The coconut oil produced is consumed locally and is not exported from this UT. The price of coconut oil is expected to remain at Rs. 12000/qlt. As the cost of production and conversion into coconut oil is likely to increase due to upward revision in minimum wages and inflation. The price of coconut oil is expected to increase to Rs.12500/qlt to Rs.13000/qlt. (**Table – III**)

Development of Coconut Processing Industries in the Islands

M/s Integrated Coco Carbon and Agro Products Pvt. Ltd. have established Integrated Coconut Processing Complex in the island by availing the financial assistance of the Coconut Development Board under its TMOC programme at South Andaman, Little Andaman and Campbell Bay with a capacity of

Months	2008	2009	2010	2011	2012
January	6800	6950	10700	11700	12000
February	6800	6950	10700	11700	12000
March	6800	6950	10700	11700	12000
April	6800	6950	10700	10700	12000
May	6800	6950	10700	10700	12000
June	6800	6950	10700	10700	12000
July	6950	6950	10700	11000	12000
August	6950	6950	10700	11000	-
September	6950	6950	10700	11000	-
October	6950	6950	10700	11000	-
November	6950	6950	10700	11000	-
December	6950	6950	10700	11000	-

Table-III: Wholesale price of coconut oil (Rs.per Qtl) in Port Blair market from 2008 to 2012

processing 10,000 nuts/day/unit. Desiccated coconut powder is produced at this unit. The unit is also planning to start the mechanical production of virgin coconut oil.

Diversification efforts made by coconut oil industries have limited success. Strategic market research is essential for bringing in product diversification and value addition. Besides coconut oil and coconut oil cake, coconut processing industry traditionally is confined to copra production, desiccated coconut, coir and coir products only. Since the coconut-processing sector is

Unit	Product	Regd	Run by Govt. Deptt.	Total
Integrated Coir Industry	Curled Coir	1	-	1
Integrated Coco Oil industry	Coconut Oil Production	17	2	19
Integrated Desiccated Coconut industries	Desiccated Coconut Powder	3	-	3
Integrated edible Copra industry	Edible Copra	9	-	9
Integrated Coco Carbon and Agro industries	Charcoal			1
Coconut oil & copra	Oil and copra	1	1	2

confined to these traditional products, it is observed that in spite of the commendable achievements made in enhancing the production and productivity of coconut, the processing sector could not make much progress in product diversification and value addition. Traditional products made out of coconut viz. brooms, ropes, yarns, coir, coconut utensils etc. have been replaced with its synthetic substitutes. The coconut growers of the island, especially the tribals must be motivated further for adopting the latest technologies.

Progressive approach made by the Agriculture Department

The Agriculture Department is making unstinted efforts to improve the livelihood of coconut farmers of the area. The development witnessed under coconut mission especially in Nicobar Group of Islands is the

result of these efforts. In order to improve the quality of copra, copra dryers, coconut harvesting pole, dehusker and coconut climber were distributed to the coconut farmers under the coconut mission. Under the pilot project on demonstration of copra dryer, 3 copra dryer units were installed at Carnicobar. Though the coconut plantation is in plenty and plays an integral part in the day to day life of tribes, they are encouraged to grow intercrops and mixed plantation in coconut gardens. The common intercrops grown are country vegetables, tuber crops; pepper, papaya and banana. Production, utilization and diversification of coconut and its value added products is the main objective of the Department.

Conclusion

Coconut to holding the key in unlocking the potentials for reducing poverty in rural farm communities. Farmers are exploited due to the intervention of middle men at different levels of marketing. There is a necessity of a system that mediates between **the farm and the firm**. Adoption

of farm level processing, involvement farmer groups, association and societies must be encouraged. Introduction of warehousing facilities, coconut park, access to price risk management like future contracts



of coconut, coconut oil, copra and oil cake should be encouraged for the sustainable livelihood.

Director, *Agriculture Assistant Department of Agriculture, A&N Admn, Port Blair,*Technical Officer, Coconut Development Board, Kochi*

CDB executed MoU with CARE KERALAM for product development and value addition

The Coconut Development Board executed an MoU with CARE KERALAM Ltd to associate together for the implementation and promotion of projects on coconut. CARE KERALAM will act as a facilitator of the projects on coconut oil, virgin coconut oil and coconut water.

CARE KERALAM Ltd is a Special Purpose Vehicle (SPV) for providing a centralized infrastructure for standardized manufacture of ayurvedic medicines



Shri. Karimpuzha Raman, MD, CareKeralam exchanging the MoU with Shri. T.K. Jose IAS, Chairman, CDB. Dr. K. Muralidharan, Director, CDB is seen

and rendering services to the cluster of ayurvedic companies in the State.

The Board is associating with CARE-KERALAM for research studies/product development, validation and commercialization in the areas such as clinical studies on use of VCO as oral application to infants to develop immunity and pharmaceutical studies to develop a product based on Tender coconut Water against urethral stones, production of antibiotic using TCW and preparation of RTS Products against diarrhoea, etc. and validation/patenting.

Acting as a facilitator, CARE KERALAM Ltd. will source research projects to be submitted to Coconut Development Board under TMOC. These research projects will be based on themes of interest to Coconut Development Board. CARE KERALAM Ltd will identify entrepreneurs who are willing to invest in technologies developed by Coconut Development Board and submit bankable Detailed Project Report's for availing assistance. Accordingly CARE KERALAM Ltd will act as one of the focal point of Coconut Development Board activities on a national basis.

Copra Procurement Under Price Support Scheme

Deepthi Nair S.

Introduction

The Minimum Support Price (MSP) for copra, both edible ball copra and milling copra, has been introduced since 1986 for ensuring a remunerative price to coconut farmers for their produce. It is a policy decision of the Government of India to announce the MSP for milling as well as ball copra for every season on the recommendations of the Commission for Agriculture Costs and Prices (CACP) with the guarantee to purchase the copra at the pre-announced price, in the event of a fall in market price and thereby ensuring reasonable price for the produce of the coconut farmers. The procurement at MSP has been instrumental in stabilizing the market prices during the previous years. A comparative statement showing the Minimum Support Price (MSP) for copra (milling and ball) vs. the actual market price ruled over the years is given in Table 1.

NAFED is the national level agency responsible for the PSS operations in the country. State designated agencies are appointed as nodal agencies of the states by the respective State Governments who are responsible for the procurement operations in that state. The details of procurement under MSP since 2007-08 is given in Table-2.

MSP in 2012

Government of India had announced a Minimum Support Price of Rs. 5100/- per quintal for milling copra and Rs. 5350/- per quintal for ball copra. The MSP are computed by CACP based on the recommendations of Coconut Development Board submitted in August 2011. Board had made a recommendation of Rs. 5500/- per quintal for milling copra and Rs. 5900/- per quintal for ball copra taking into account the cost of cultivation of coconut (in August 2011) and in consultation with State Governments. Procurement operations have been initiated in the different coconut growing states since March 2012. The details of procurement are given in Table-3.

Table 1. Comparison of MSP of copra and the market price (1986-2012)

Year	MSP	Yearly average wholesale price of milling copra	MSP	Yearly average wholesale price of milling copra
1986	1200	1422	ND	1688
1987	ND	1991	ND	2170
1988	ND	2104	ND	2830
1989	1500	1605	ND	2498
1990	1600	1799	ND	1988
1991	1700	2660	ND	3053
1992	ND	2993	ND	4499
1993	2150	2580	ND	3700
1994	2350	2165	ND	2619
1995	2500	2316	ND	2596
1996	2500	2982	2725	3352
1997	2700	3484	2925	4921
1998	2900	2928	3125	4675
1999	3100	3506	3325	3850
2000	3250	2335	3500	3738
2001	3300	2046	3550	2558
2002	3300	2871	3550	3583
2003	3320	3861	3570	4482
2004	3500	4397	3750	6383
2005	3570	3768	3820	7238
2006	3590	3313	3840	5078
2007	3620	3285	3870	3714
2008	3660	4057	3910	4216
2009	4450	3361	4700	4406
2010	4450	4009	4700	4516
2011	4525	6188	4775	6482
2012	5100	6101	5350	5645

Table 2. Procurement of Copra under MSP 2007-2012

YEAR	ALL INDIA (IN MTS)
2007-08	12010.000
2008-09	490.000
2009-10	61281.000
2010-11	30600.000
2011-12	343.000
2012-13 (as on 21.8.2012)	33369.405

The procurement quantities are not large enough to make an impact on the market prices and stabilize them. Moreover there has been manifold increase in the prices of agricultural inputs especially fertilizers since then (Table-4).

Considering these factors, the Board has already taken up with the Central and State Governments that the MSP already declared itself is inadequate to protect the risk borne by the coconut farmer. Policy decisions and Government intervention is crucial in this circumstance, that too on a war footing, to help the farmers to tide over the grave situation that they are in.

Constraints in assuring remunerative price for coconut and possible solutions

Restriction on export of coconut oil: The prices of coconut oil in the country, which is the major product from copra, was always found to rule above the international prices of coconut oil. Hence, the export market and the prices in the global scenario were never attractive for coconut oil. Currently, when the domestic prices of coconut oil and international prices are almost on par, the export market

prices have turned competitive for coconut oil. Considering the huge ethnic population of South Indian people in the Middle East countries, there is scope for penetration of Indian coconut oil in the Gulf market. Permitting export of coconut oil in bulk packing through all the South Indian ports will be beneficial to the coconut farmers, since as an edible oil, coconut oil is consumed only in Kerala and adjoining parts of Tamilnadu.

Import of palm oil : Palm oil is the major competitor for coconut oil in South India. A ban on the import of palm oil through the southern

increase in the import duty of refined palm oil from the existing 7.5% would prove beneficial to the coconut farmers. The Board has already taken up the matter with the Ministry of Agriculture, Government of India.

Restriction of incentive for the export of coconut oil

Though coconut oil is eligible for 5% of the FOB value under the export incentive scheme “Visheshha Krishi Grameen Udyog Yohana (VKGUY)”, citing the reason of ban on export of edible oil, it is denied at present. Extending VKGUY benefit to coconut oil exports in bulk

Table- 3. Procurement of copra during 2012 season

State/procuring agency	Quantity procured MT		Total
Milling copra			
Kerala	Kerafed	Marketfed	
	4769.792	3590.287	8360.079
Tamil Nadu (Tanfed)			16151.278
Andhra Pradesh (AP Oil Fedn)			5507.950
Lakshadweep (Lakshadweep fedn)			3350.098
TOTAL			33369.405
Ball copra			
Kozhikode			1.950
Karnataka			1577.720

ports will result in increased consumption of coconut oil. The current import duties are also congenial for large scale import of palm oil for instance, at present, crude palm oil has **zero import duty** and refined palm oil has an **import duty of 7.5%**. Import of palm oil has almost doubled during the last six months.

A hike in the import duty of crude palm oil to 10% and appropriate

packing through southern ports would definitively improve the export of coconut oil thereby causing an impact on the market prices.

Excessive dependence on copra and coconut oil

The Board has been taking concerted efforts to reduce dependence on copra and coconut oil. This dependence is the major cause for the fall in coconut prices

in response to the undercurrents in the price rates for edible oils in the international market. Coconut being a crop with multifarious purposes, promotion of product diversification will prove beneficial in ensuring the coconut growers a stable price.

Increasing consumption of tender coconut will not only provide a nutritious, natural health drink, but will also aid in increased and sustained returns to the coconut growers. Production of Neera, a non-alcoholic and nutritious drink

Table- 4. The cost of fertilizers (2011-2012)

Name of fertiliser	Price per kg in August 2011	Price per kg in August 2012
Urea	6.19	6.53
Rajphos	5.15	7.03
MOP	7.14	16.69

from the immature inflorescence of coconut can be promoted due to its potential for value addition, employment generation and better returns to the coconut farmers. All the major coconut-growing countries of the world like Phillipines, Thailand, Indonesia etc have exploited the potential of this product in the domestic and export market. Products like coconut flower syrup, honey and coconut palm sugar produced from immature coconut inflorescence sap were displayed during the recent Cocotech seminar conducted at Kochi and have consolidated niche markets in major consuming countries. Coconut sugar with low glycemic index can be consumed even by diabetic patients. It is also rich in nutrients. In the context of

price fall of coconut and copra, products from immature coconut inflorescence holds much potential. When a certain proportion of the inflorescences in a palm are marked for production of Neera, coconut sugar, honey and other products, it not only earns the farmer more returns and diversified products, but also reduces the arrival of coconut/copra in the open market thereby increasing demand and price for coconut and its products. Policy decisions at the Government level

Table- 5. Comparison of import of vegetable oils (2010-2012)

Product	Import in MT from Nov 2010 to May 2011	Import in MT from Nov 2011 to May 2012	% increase over the previous year
RBD palmolein	5,51,327	10,84,933	97%
Crude Palm kernel oil	35,564	64,692	82%
Crude Palm oil	26,39,124	30,14,253	14%

are essential for the production of these products since it involves tapping of the inflorescence.

Lack of rural infrastructure for copra making

A major handicap towards the production of Fair Average Quality copra for supply to the procurement agencies is the lack of infrastructure for copra making. Creation of a community based infrastructure for copra making will aid in enhanced production of copra thereby supporting the procurement operations. If the provision of copra driers to the farmer growers associations, producer societies etc can be effected through the schemes of the different departments under the State Government, the situation of low

prices and low procurement under PSS can be solved to a great extent and the farmers could realise a remunerative income. Mobilisation of funds of the Local Self Government Institutions through the concerned departments and Planning Board and exploring the potential for funding of driers through RKVY, ATMA, SHM etc will enable the provision of more infrastructure for copra processing which is the major stumbling block in the procurement operations. The

infrastructure can be created by providing financial support to the farmer producer organisations so that the benefit of the project reaches the targeted end user.

Assuring a remunerative price for coconut will motivate the farmers for better management of gardens and for that, product diversification is a must. Creation of infrastructure in organized mode like establishment of coconut parks will increase the processing of coconut. This combined with appropriate policy decisions will take the coconut sector to newer heights. The sky is the limit for this crop, only hurdle is that we should strive hard to reach it.

(Marketing Officer, CDB, Kochi-11)



Import of vegetable oils an outlook

P.O. Baby

During the year 2010-11 India has imported 69.14 lakhs tones of vegetable oils valued at Rs.2991972 lakhs. When compared to the previous year this shows an increase of 16 percent in quantity and 13 percent in value. During the year 2011-2012 (up to October 2011) 48.37 lakhs tones of vegetable oils worth Rs.2658387.3 had imported to the country. Among the vegetable oils imported, palm oil and its fractions accounts for about 77 percent in quantity and about 73 percent in value. Palm kernel oil is increasingly being substituted in the place of coconut oil for industrial applications. It is also reported to be used as an adulterant in coconut oil. Among the other vegetable oils imported, soybean oil and its fractions accounts for 13 percent in quantity and about 15 percent in value. Sunflower oil is another major oil imported which accounts for about 8 percent in quantity and about 9 percent in value. Palm kernel oil occupies about 2 percent

in quantity imported. Huge import of vegetable oils adversely affects the price of coconut oil in the domestic market. To improve the domestic coconut oil price, the custom duty on import of vegetable oils needs to be re-imposed.

The price of coconut oil opened at US\$1981 per MT in April 2011 and closed at US\$ 1520 in December 2011. The yearly average price was US\$ 2018 per



MT. The highest price of US\$ 2251 was reached in May 2011. The price of coconut oil in the international market opened at US\$2067 during the month of April 2011 and closed at US\$1350 in December. The yearly average price was US\$1740 per MT. The highest price of US\$ 2117 per MT was reached in May. The yearly average domestic price of coconut oil was about 16 percent higher than that of the international

price.

During April 2011, the price of copra in the domestic market opened at US\$1353 per MT and closed at US\$1038 in December. The yearly average price was US\$1310 per MT. The maximum price of US\$1539 was attained in May. The price of copra in the international market opened at US\$ 1354 per MT during April 2011 and closed at US\$875 per MT in December 2011. The yearly average price was US\$1139 per MT. The yearly average domestic price of coconut oil was about 15 percent higher than that of the international price.

The price of coconut oil in the domestic market during April 2012 opened at US\$1500 per MT (Rs.74060) and closed at US\$1120 per MT (Rs.62070) in July. The price of coconut oil in the international market in April 2012 opened at US\$1451 per MT and closed at US\$1040 per MT in July.

During April 2012, the price of copra in the domestic market opened at US\$1025 per MT (Rs.50610) and closed at US\$753 per MT in July while in the international market, the price of copra opened at US\$865 per MT in April 2012 and closed at US\$680 per MT in July.

CDB, Kochi-11

Vermicompost production, from ash to cash

G.K.Girijesh, T.S. Vageesh, R. Nagaraj, A.S.Kumaraswamy, M.Dinesh Kumar

Abstract

A study was conducted at ZARS, Navile, Shimoga for recycling dried coconut fronds through vermicomposting. Around 5.58 tones of vermicompost can be produced out of coconut fronds from one ha plantation per year having nutrient composition of 1.38, 0.31, and 0.24 per cent of N, P and K, respectively, and N-fixing and P solubilizing organisms.

Introduction

Coconut is one of the important commercial crops of Karnataka State. It is not only a source of food and drink but also provide raw material for coir industry. In rural areas, particularly in Southern and Central Dry Zones of Karnataka mainly in Tumkur, Hassan, Bangalore, Mysore, Chitradurga, Chickmagalur and Kolar districts. It is one of the main sources of fuel. Tones of dry coconut shell, husk

and frond is being burnt annually in the state. This huge quantity of bio resource can be converted into good manure which can partly substitute part fertilizer nutrition of the crops grown in the region.

Particulars	Coconut area (000'ha)	Dried coconut fronds biomass (m.t.)
Karnataka	405	3.64
India	1903	17.13

Among the by products coconut fronds form the major share of the total biomass produced by a coconut tree. On an average each frond weighs about six kg. Similarly, average number of dry fronds fallen from individual tree is 10-12. Based on these figures and @ 150 trees per ha, it was worked out that nearly 17.12 and 3.64 m. t. of dry coconut frond biomass is available for composting in Karnataka and India, respectively (Table-1). This much

of valuable natural resource is being annually burnt to ash. Instead, it can be converted into useful organic manure, if it is composted properly.

In this regard, a study was conducted at ZARS, Navile, Shimoga, to produce vermicompost out of coconut fronds.

Material and Methods

The studye analyzed the possibilities of production of vermicompost out of coconut fronds available right in the farm. The dried coconut fronds were collected as and when fallen and subjected to chaffing through a 5 HP chaffing machine (shredder) (Fig.1) into small pieces.

The chaffed material of around 400 kg was put into compost pit of size 7.5 x 1.5 x 0.5 m (on an average 70 kg of material can be put into one cum). On this material, cow dung slurry (10 kg of cow dung



Feeding Coconut Fronds to Shredder



Chaffed Material from Shredder Outlet



Vermicompost Pit Filled with chaffed material



Chaffed Coconut Frond being subjected to action of Earthworms



Semi Decomposed Material



Final Product of Vermicomposting

in 100l of water) was sprinkled and kept for 8-10 days. After the incubation period, 2.5 kg of earthworms were released in to the pit at 3-4 spots. Later on cow dung

slurry was sprinkled twice in a week @ of 5 kg per 50 litre of water. At the end of 14-15 weeks the vermicompost was analyzed for its nutrient content and for the microbial load.

Results and Discussion

The vermicompost production started from 45-50th day and completed by 14-15th week. The results showed that around 248 kg

Table 2 . Extent of vermicompost produced and estimated production potential per ha frond biomass

Raw material (Kg)	Quantity of material used		Extent of final product		Raw material to compost ratio
	For sample pit (5.62 cum)	Estimated for available frond biomass /annum	From sample pit (5.62 cum) (kg)	Estimated production from one ha frond biomass/annum (tones)	
1.Coconut fronds	400	9000	248	5.58	0.58
2.Cow dung	28** (140)*	630** (3150)*			

* Wet weight of cow dung ** Dry weight of cow dung

of compost (on air dried basis) was produced from a pit of size 7.5 x 1.5 x 0.5 m (5.62 cum) by filling chaffed coconut fronds fallen @ of 71 kg/cum. The estimated quantity of vermicompost that can be produced from total frond biomass available per annum per ha on air dried basis was 5.58 tones (Table 2).

Quality of the compost produced

The nutrient value of the vermicompost produced is given in Table 3, which contains 1.38, 0.31, and 0.24 per cent of N, P and K, respectively. The microbial composition is given in Table 4. The total microbial population (Bacteria, fungi, actinomycetes) was higher in vermicompost prepared from coconut fronds than raw coconut fronds. This may be attributed to higher nutrient contents of vermicompost and addition of cow

Table 3. Nutrient composition of vermicompost prepared out of coconut fronds

Nutrient	Coconut fronds	End product (Vermicompost)
Nitrogen(N) %	1.06	1.38
Phosphorous (P)%	0.08	0.31
Potassium (K)%	0.85	0.24

dung which can act as starter culture for these microbes. The N-fixing and P-solubilizing organisms in vermicompost, which were not present in the raw coconut fronds.

The vermicompost production potential through utilization of coconut fronds available is around 10.62 and 2.34 m.t. in India and Karnataka, respectively. In terms of nutrients, it is equal to 146, 32.92

and 25.5 thousand tones of nitrogen, phosphorus and potassium, respectively, at the national level (Table 5). The coconut fronds which were used as base material for preparation of vermicompost had a nutrient content of 1.06, 0.08 and 0.85 per cent of N, P and K,

Table 4 Microbial population in vermicompost and coconut fronds (cfu/g)

Microbial group	Coconut fronds	Vermicompost
Bacteria	17×10^4	218×10^5
Fungi	9×10^2	44×10^3
Actinomycetes	5×10^2	28×10^2
N-fixing organisms	Nil	57×10^2
P-solubilizing organisms	Nil	25×10^2

respectively. Vageesh *et al.* (2010) reported that the compost prepared from primary ETP sludge and press mud (1:1 proportion) had a nutrient content of 0.94, 0.40 and 0.52 per

Table 5 Estimated nutrient production potential of vermicompost out of dry coconut fronds

Boundary	Million tones		000' tones	
	Vermicompost	Nitrogen	Phosphorus	Potassium
India	10.62	146	32.92	25.49
Karnataka	2.34	32.2	7.25	5.62

Table 6 Extent of nutrients recycled back through vermicomposting of dry coconut fronds

Nutrient	Recommended quantity (kg ha ⁻¹)	Quantity of nutrients supplied through recycling (kg ha ⁻¹)	Extent of substitution (%)
Nitrogen	75	77	100
Phosphorus	48	17.3	36
Potassium	180	13.4	7.44

cent N, P and K, respectively. Elinthamby (2010) reported a critical concentration of 2.5-2.6 % of N, 0.17-0.18 per cent of P and

0.8 to 1.05 % of K in frond 17 of mature oil palm. Based on this and nutrient content of vermicompost prepared out of coconut fronds, it is possible substitute 100, 36 and 7.44 per cent of recommended N, P and K through recycling of this huge biomass (Table 6).

Conclusion

Coconut fronds fallen from one ha of coconut garden can be converted in to 5.58 tones of vermicompost. Under the given situation of environmental pollution, high prices of fertilizers, soils losing their fertility and productivity due to lack of enough organic matter, scarcity of organic manures as a result of poor resource base at the farm level, conversion of crop by products/residues is only the option to maintain soil organic matter. As there is a greater thrust for organic farming in recent years, residues of coconut plantations like dry fronds

can alleviate the pollution problem and sustain soil productivity in the years to come.

College of Agriculture, Shimoga

Business Opportunities

CRUDE COCONUT OIL

Registered company; KATTNA Agency Fiji Ltd. specializes in the importation of copra from Kiritimati Island in Kiribati planning to crush the imported copra in Fiji. They are seeking interested buyers for their crude coconut oil. Interested parties may contact:

Ms. Sue

Director, KATTNA Agency

Email: kattna.agency@gmail.com

COCONUT SHELL CHARCOAL AND VIRGIN COCONUT OIL EXPORTER

Production capacity of coconut shell charcoal is 100 tons per month or more with the quality of 5-6% moisture content and 3% ash. Virgin Coconut Oil production capacity is 100 tons/month.

Contact person:

Mr. Joseph Jupiter Pardede

Kepala Balai Riset dan Standardisasi Industri

Badan Penelitian dan Pengembangan Industri

Departemen Perindustrian

Jl. Diponegoro No. 21-23

Manado 95112

North Sulawesi

Email: jos1155@yahoo.com

REFINE COCONUT OIL

An ice coating producer from Poland is looking for Refine Coconut Oil. They annually use approx. 1000 MT. Interested parties may contact:

Mr. Dorota Hoffmann

Import Department

Terravita Sp. Z.o.o.

ul. Szarych Szerega 48

60-462 Poznan

Poland

Tel: 48 61 66 88 315

Fax: 48 61 822 19 31

Mobile: 609 479 239

Email: import@terravita.com.pl

www.terravita.pl

GRATED COCONUT

A trade company, who deal with import export of different raw materials, is looking for grated coconut. Interested parties (exporting companies) contact directly:

Mr. Carlos Marin

Director of NISA S.A. de CV

Cancun-Quintana Roo Mexico

Tel: 52 998 886 88 96

Email: carlos.marin@gruponisacar.com

Office in Uruguay

Montevideo

Tel: 00 598 2 901 06 36

COCONUT WOOD

A company is looking for suppliers of wood of red coconut and black palmyra (black palm tree) as lumber/timber/ squares/logs/planks with specification of the thickness: 20/30/40/50 mm, widths: 5 – 15 cm (may be 20 cm), or square: 5x5 6x6 8x8 10x10 cm, Lengths: 1m+, high + medium density, best quality, and dry (AD+KD). Interesting parties may contact:

Mr. Mathias Pfeifhofer

Email: brainwood@gmx.de

ORGANIC COCONUT MILK

An Australian buyer has approached Pacific Islands Trade & Invest, expressing interest in importing certified organic coconut milk from the Pacific islands. The buyer is currently buying in 20 litre containers from Thailand. Product must be certified organic. For further details contact:

Mr. Jeremy Grennell

Pacific Islands Trade & Invest

P.O. Box 5407

Sydney, NSW 2000

Australia

Tel: 612 9290 2133

Email: jeremy.grennell@pacifictradeinvestment.com

Source: The Cocommunity, August 2012

Project Approval Committee cleared 18 projects



A view of the 39th PAC meeting. Seen are Shri. T.K.Jose IAS, Shri. Karimpuzha Raman, Dr. George V. Thomas, Dr.M. Tamil Selvan, Dr. M. Aravindakshan, Dr. D.M.Vasudevan

The 39th meeting of the Project Approval Committee (PAC) on Technology Mission on Coconut (TMOC) cleared 18 projects worth Rs. 27.49 crores. The subsidy of the Board is Rs.3.37 crores. The 39th PAC was held at Coconut Development Board, Kochi under the chairmanship Shri. T.K.Jose IAS, Chairman, CDB on 17th August 2012.

The 39th meeting of the Project Approval Committee (PAC) on Technology Mission on Coconut (TMOC) was held at the Board Room of Coconut Development Board, Kochi on 17th August 2012.

Shri. T.K. Jose IAS, Chairman, Coconut Development Board and Chairman PAC chaired the meeting.

The cleared projects include four projects on Research, thirteen projects on Adoption of Technology for Processing and Product Diversification and a project on Market Promotion. Dr. M.Tamil Selvan, Additional Commissioner (Horticulture), Ministry of Agriculture, Govt. of India, Dr. George. V. Thomas, Director, CPCRI, Kasaragod, Shri. C.P. Appanna, General Manager, Technical Services, Bombay, Shri.

M.M. Jose, Senior Marketing Development Officer, Directorate of Marketing & Inspection, Kakkand, Shri. Sugata Ghose, Chief Coconut Development Officer i/c., Coconut Development Board & Dr. K. Muralidharan, Director Coconut Development Board attended the meeting. Dr.M. Aravindakshan, Co-ordinator, Amritha School of Environmental Studies, Ettimedai, Coimbatore & Prof. D.M. Vasudevan, MD, FRC Path, Co-investigator, Amritha School of Medicine, Amritha Institute of Medical Sciences, Kochi attended the meeting as invited expert.

Technology Development and Organic Exhibition 2012

Coconut Development Board, Regional Office, Bangalore participated in Technology Development & Organic Exhibition – 2012 held at Cavari Hall, Madkeri from 18th May 2012 organized by the Natural Resources Development Centre, Madkeri. The

exhibition was inaugurated by Dr. M.R. Ravi, KAS, Assistant Commissioner, Department of Revenue, Government of Karnataka, Madkeri on 18th May 2012. Board showcased different varieties of coconut bunches and value added products like ball

copra, branded coconut oil, virgin coconut oil, packed tender coconut water in cans and pouches, desiccated coconut powder, coconut milk powder, coconut biscuit, coconut based vinegar, coconut water concentrates, shell and wood based handicrafts and publications of the Board.

International coir tech expo held at Kochi

Coir Tech Expo, an international exhibition of machinery and other related products of the coir sector was held at Marine Drive, Kochi from 12th to 16th August 2012. Shri. Oommen Chandy, Chief Minister, Kerala inaugurated the expo. The event showcased the latest developments of the coir industry. National and international experts participated in seminars held as part of the programme. The expo attracted the entrepreneurs and industrialists of the sector.

The expo was a convergence of all the technologies developed by the research institutes of Coir Board and the technologies evolved under the collaborative projects by national level institutes for the benefit of coir industry in India. The expo provided platform for the machinery manufacturers to showcase all their innovative technologies, equipment and other

Hospitality World

Coconut Development Board, Regional Office, Bangalore participated in Food and Hospitality World - 2012 exhibition, held at Tripura Vasini, Palace Grounds, Bengaluru from 21st June to 23rd June 2012. Shri. Shrikantadhatha Odayor, Maharaja of Mysore inaugurated the exhibition. Board showcased various value added coconut products like coconut oil, virgin coconut oil, packed tender coconut water, desiccated coconut powder, coconut milk powder, coconut based vinegar and coconut water concentrates. Handicraft items made out of coconut wood and shell were also displayed in the Board's stall.



Shri. Oommen Chandy, Chief Minister, Kerala inaugurating Coir Tech Expo

diversified products required for the coir industry. The expo provided the opportunity for stakeholders in the coir industry to understand the technological advancements made in different areas of coir production.

A five-day exhibition displayed various coir products ranging from

coir jackets, umbrella, bags, slippers and ornaments. Delegates from abroad, from Tamil Nadu, Andhra Pradesh, Odisha and Karnataka participated in the exhibition. Coconut Development Board had its display cum sales counter in the coir tech expo.



A view of the Board's Stall in Hospitality World

Prizes of Literary competition distributed



Master Devadarsan, 1st prize winner receiving the certificate from Shri. Chemmanam Chacko

Prizes of the literary competitions conducted by the Coconut Development Board in association with Akshshaya Book Trust were distributed on 28th July 2012 at SR V H S Auditorium, Kochi. Shri. Chemmanom Chako, eminent Malayalam writer inaugurated the talent meet and distributed the prizes. Shri. T K Jose

IAS, Chairman, Coconut Development Board presided over. Adv. Varkala B Ravikumar, Member, Coconut Development Board and Shri. Payipra Radhakrishnan former Secretary, Kerala Sahithya Academy spoke on the occasion. Dr. Remany Gopalakrishnan, Deputy Director delivered the welcome address and

Smt. Mini Mathew, Publicity Officer proposed a vote of thanks. Competitions were held in essay writing, poetry and short story on coconut for public, teachers and students. The first, second, third and consolation prizes comprised of Rs. 4000, Rs.3000, Rs.2000 and Rs. 1000 respectively.

Coconut seedlings planted at Kerala House

To commemorate the Farmers day on Chingam 1st, coconut seedlings were planted at the premises of Kerala House on 17th August 2012. Chingam 1st is observed as farmers day in Kerala. Shri Mullapally Ramachandran, Minister of State for Home Affairs, Shri K.C. Venugopal, Minister of State for Power, Dr. K.S. Radhakrishnan, Chairman, Kerala Public Service Commission, Adv. P.T. Thomas, MP, Dr. Charles Dias, MP and member, CDB and Shri K.P. Dhanapalan, MP planted coconut seedlings in the Kerala House premises.

Shri. Mullapally Ramachandran who spoke on the occasion requested the government of India to declare tender coconut water as the national drink of the country. Adv. P.T. Thomas, MP in

his welcome address spoke on the importance of the crop in Indian culture and economy. Packed



Shri Mullapally Ramachandran, Minister of State for Home Affairs, planting the seedling at the premises of Kerala House

tender coconut water was distributed on the occasion.

Monthly operations in coconut gardens - *September*

Andaman & Nicobar Islands: Plough in the green manure crop and incorporate it into the soil. Apply organic manure such as dried compost/cow dung/poultry manure @ 25 kg/tree in the basin taken around the palm. Cover the manure with soil. New planting of quality seedlings can be undertaken now. Prevent accumulation of rain water in the seedling pits. Clove, nutmeg, cinnamon, pepper and banana can be planted in the inter spaces. Control rhinoceros beetle by adopting IPM package consisting of extraction of beetle using a beetle hook from the affected palm, proper disposal of breeding materials of the beetle and biological suppression using microbial agents like *Baculovirus of Oryctes* and *Metarhizium anisopliae*. Incorporation of the weed plant *Cleodendron infortunatum* in the breeding grounds has been found effective as it disrupts larval development and finally reduces pest population. Fill the youngest three leaf axils with a mixture of 250g powdered marotti/neem cake with equal volume of sand or deposit 10 gm naphthalene ball (4 balls) per palm and cover with sand.

Andhra Pradesh: Plough the land and sow cowpea or any pulse crop or vegetable crops. If stem bleeding disease is noticed: (1) remove the affected bark tissues on the stem and apply 5 per cent calixin on the wound and also apply warm coal tar, (2) root feed the affected palm with 5 percent calixin @ 100ml solution at quarterly intervals, (3) apply 5 kg neem cake per palm per

year along with the organic manure; and (4) provide drainage during rain and irrigate during summer. If the attack of the mite is noticed, spray neem oil - garlic - soap emulsion 2 percent (20 ml neem oil + 20 gm garlic emulsion + 5 gm soap in 1 litre water) or commercial botanical pesticides containing azadirachtin 0.004 per cent @ 4ml per litre of water on bunches, especially on the perianth region of buttons and affected nuts or root feed neem formulations containing azadirachtin 5 per cent @ 7.5 ml with equal volume of water.

Assam: Apply the second dose of fertilizers @ 334 g urea, 666 g single super phosphate(SSP) and 666g muriate of potash(MOP) with neem cake @ 5 kg/palm/year in the coconut basin. Remove ungerminated nuts and dead sprouts from the nursery. Slow growing and late germinated seedlings are to be removed from the nursery. Apply vermicompost/cowdung @ 25-50 kg for each adult coconut palm. Gap filling can be done during this month.

Bihar / Madhya Pradesh: Search for bud rot disease. If found infected remove all the affected tissues in the crown and apply bordeaux paste. Check for the incidence of stem bleeding. If stem bleeding disease is noticed: (1) remove the affected tissues on the stem and apply 5 per cent calixin on the wound and also apply warm coal tar, (2) root feed the affected palm with 5 percent calixin @ 100 ml solution per root at quarterly intervals, (3) apply 5 kg neem cake

per palm per year along with the organic manure during the post monsoon period; and (4) regulate optimum field moisture by providing drainage during rains and irrigating the palms during summer. New planting of selected quality seedlings can be continued during this month. Support the newly planted seedlings by providing suitable props. The gaps caused by the death of seedlings of previous/current year planting should be filled up preferably with polybag seedlings.

Chhattisgarh: Drench the basin of the transplanted seedlings with 0.05 per cent chlorpyrifos twice at 22-25 days interval against the attack of termite. Remove excess soil from the collar region of the seedlings for preventing collar rot. If the palm shows the symptom of stem bleeding, (a) remove the affected bark tissues on the stem and apply 5 per cent calixin on the wound and also apply warm coal tar, (b) root feed the affected palm with 5 percent calixin @ 100ml solution at quarterly intervals, (c) apply 5 kg neem cake per palm per year along with the second dose of fertilizer ;and (d) provide drainage during rainy season and irrigate during summer. Mulch coconut basin with coconut wastes and green matters.

Karnataka: Ideal time for planting of new seedlings, opening of basins, digging of pits and gap filling if any in the existing plantation. Mulch coconut basins with suitable green leaves. Continue to procure quality seed nuts from the identified mother palms and sow in the nursery.

Intercultural operations have to be undertaken to keep the plantation free of weeds. Suitable intercrops like banana, vegetables, tuber crops etc. can also be raised in the coconut gardens to increase the income per unit area. Search for bud rot disease and remove infected tissues in the crown and treat with bordeaux paste. As a prophylactic measure spray 1 per cent Bordeaux mixture on the healthy palms in the vicinity of affected palms. Apply Phorate 10 G @ 100 g/ palm or drench the root zone with chlorpyrifos 20EC @ 2.5 ml/litre to control white grubs in case of its incidence. Control rhinoceros beetle by adopting IPM package consists of extraction of beetle using a beetle hook from the affected palm, proper disposal of breeding materials of the beetle and biological suppression using microbial agents like *Baculovirus of Oryctes* and *Metarhizium anisopliae*. Incorporation of the weed plant *Cleodendron infortunatum* in the breeding grounds has been found effective as it disrupts larval development and finally reduces pest population. Fill the youngest three leaf axils with a mixture of 250g powdered marotti/ neem cake with equal volume of sand or deposit 10 gm naphthalene ball (4 balls) per palm and cover with sand.

Kerala/Lakshadweep: In low lying areas, plant coconut seedlings in shallow pits or on raised mounds. Apply the second dose of fertilizers in rainfed garden and one-fourth of the recommended dose in irrigated gardens. Apply cattle manure or green manure @ 25-50 kg to each adult palm if not done during previous months. Apply magnesium

sulphate @ 500 gm per palm along with second dose of fertilizers and cover the basin completely. Dig out or plough the garden. Fill the youngest three leaf axils with a mixture of 250g powdered marotti/ neem cake with equal volume of sand or place naphthalene balls 10g/ palm and cover them with sand against rhinoceros beetle and red palm weevil. If the attack of the mite is noticed, spray neem oil - garlic - soap emulsion 2 percent (20 ml neem oil + 20 gm garlic emulsion + 5 gm soap in 1 litre water) or commercial botanical pesticides containing azadirachtin 0.004 per cent @ 4ml per litre of water on bunches, especially on the perianth region of buttons and affected nuts or root feed neem formulations containing azadirachtin 5 per cent @ 7.5 ml with equal volume of water.

Maharashtra/Goa/Gujarat: Apply second dose of fertilizers in basins dug around the palms. Apply green leaves at the rate of 25kg per palm. Give a third round of prophylactic spraying with bordeaux mixture to all palms. Remove ungerminated nuts and dead sprouts from the nursery. Discard seedlings exhibiting poor growth and delayed germination.

Orissa: Sow green manure crop seeds in the coconut basins. Keep the nursery free of weeds. Clean the crown from pest/ disease attack. Undertake all plant protection measures. If the attack of the mite is noticed, spray neem oil - garlic - soap emulsion 2 percent (20 ml neem oil + 20 gm garlic emulsion+5 gm soap in 1 litre water) or commercial botanical pesticides containing azadirachtin 0.004 per

cent @ 4ml per litre of water on bunches, especially on the perianth region of buttons and affected nuts or root feed neem formulations containing azadirachtin 5 per cent @ 7.5 ml with equal volume of water.

Tamil Nadu/Pondicherry: Start intercultural operations like taking basins, ploughing etc. Apply second dose of fertilizers, 500 g urea, 800 g single super phosphate and 800 g muriate of potash per adult palm under rainfed conditions. If the attack of the mite is noticed, spray neem oil - garlic - soap emulsion 2 percent (20 ml neem oil + 20 gm garlic emulsion + 5 gm soap in 1 litre water) or commercial botanical pesticides containing azadirachtin 0.004 per cent @ 4ml per litre of water on bunches, especially on the perianth region of buttons and affected nuts or root feed neem formulations containing azadirachtin 5 per cent @ 7.5 ml with equal volume of water. Strengthen bunds of the pit of the newly planted seedling to avoid rain water accumulation in the pit. Take adequate care of the newly planted seedling by providing support/ irrigation etc.

Tripura: Clean the crown to protect the palm from any pest/ disease attack. The entire crown should then be sprayed with one per cent bordeaux mixture. Second dose of fertilizers should be applied during the month. After application of fertilizer if there is no rain, irrigation should be done.

West Bengal: Hand-weed the nursery and provide partial shade to seedlings. Continue harvest of matured nuts.

Market Review - July 2012

Highlights

- ◆ The price of milling copra, ball copra and coconut oil expressed a downward trend at all the major markets during the month under report.
- ◆ The international price of coconut oil expressed a downward trend during the month under report. The domestic price of coconut oil at Kochi market was about 8 percent higher than that of the international price.

The prices of copra and coconut ruled below minimum support price in major producing states and procurement activities were initiated by the government machinery under price support schemes.

COCONUT OIL

The price of coconut oil quoted at all the major marketing centres in the country expressed a steady trend during the month under review.

The monthly average price of coconut oil at Kochi was Rs. 6207/- per quintal. The price of coconut oil at Alappuzha market also moved in tune with the price behavior of Kochi market. The monthly average price was Rs. 6227/- per quintal at

Alappuzha market and Rs. 6367/- at Kozhikode market. The prices at Kochi, Alappuzha and Kozhikode markets were about 2 to 3 percent higher than that of June 2012

MILLING COPRA

The monthly average prices of FAQ copra recorded at Kochi market was Rs.4175/- per quintal. The monthly average prices of Rasi copra at Alappuzha market was Rs. 4157/- per quintal. The prices at Kochi, Alappuzha and Kozhikode were about 3 to 5 percent higher than that of the previous month. The procurement operations under Price Support Scheme have already been initiated in Tamil Nadu and Kerala by TANFED and NAFED respectively. The minimum support price of milling copra has been fixed

at Rs. 5100/- per quintal for 2012 season. A total quantity of 14059 MT of copra was procured by Nafed through Tanfed in Tamil Nadu and 6727 MT was procured in Kerala by Nafed through Kerafed and Marketfed. Around 5508 MT of copra was procured in Andhra Pradesh and 3350 MT in Lakshadweep.

The monthly average prices of milling copra at Ambajipeta market in Andhra Pradesh was Rs.4180/- per quintal compared to Rs. 3880/- recorded during the previous month.

EDIBLE COPRA

The monthly average prices of Rajapur copra at Kozhikode market was Rs. 5269/- per quintal, which was marginally lower compared to the price of the previous month. The monthly prices of ball copra at Kozhikode market averaged at Rs. 4685/- per quintal.

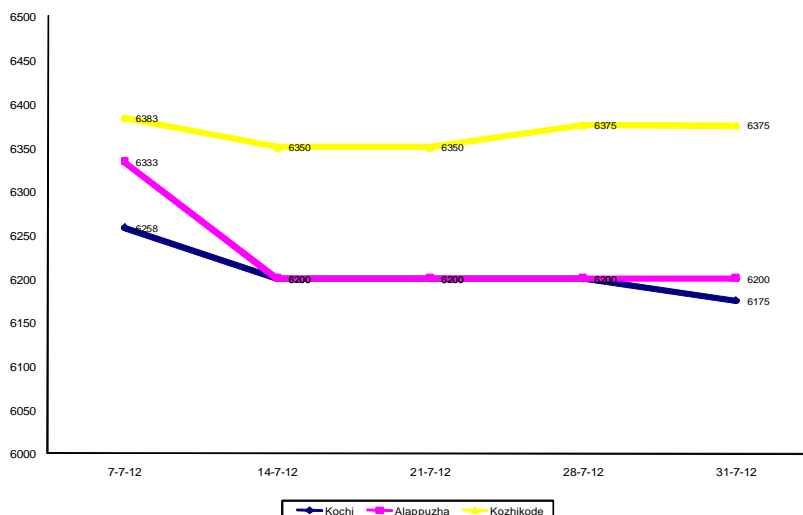
The monthly prices of ball copra at APMC market Tiptur, in Karnataka averaged at Rs. 5313/- per quintal in July 2012 while it was Rs 5329/- in Bangalore and Rs. 5254/- in Arsikere. The Minimum support price of edible copra has been fixed at Rs. 5350/- per quintal for 2012 season.

DRY COCONUT

The monthly average price of dry coconut was around Rs. 4824/- per thousand nuts at Kozhikode market which was marginally lower than that of the previous month.

COCONUT

The monthly average price of Rs.5508/- per thousand nuts for dehusked coconut at Nedumangad



Price behaviour of coconut oil during July 2012

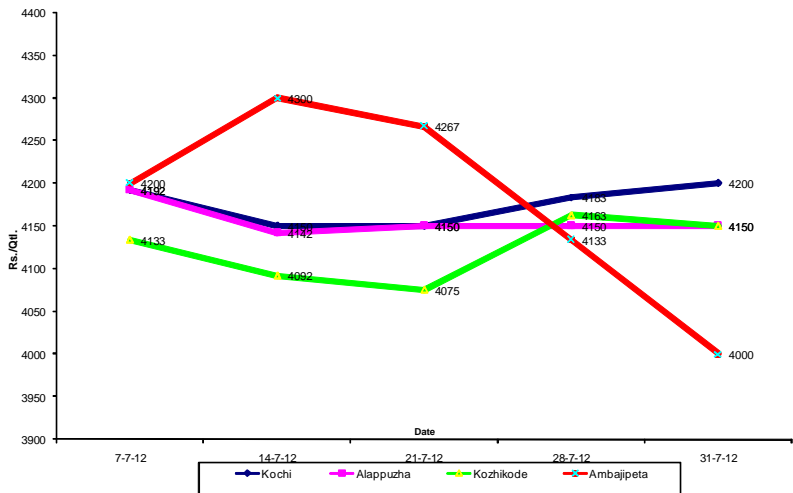
market was marginally higher than that of the previous month. Arsikere APMC market recorded an average of Rs.5594/- for thousand partially dehusked nuts which was marginally lower than that of previous month.

The monthly average prices of partially dehusked coconut at Bangalore APMC market was Rs. 5820/- which was about 6 percent lower than that of previous month.

The monthly average price of partially dehusked coconut Grade-1 quality at Mangalore APMC market improved to Rs.9493/- per thousand nuts which was marginally lower than that of the previous month. The monthly average price of coconut in Assam was Rs.20 per nut while it was Rs.21 in Tripura and Rs.25 at Dimapur in Nagaland. The Government of India has declared the Minimum Support price of dehusked mature coconut with water at Rs. 14/- per kg.

TENDER COCONUT

Prices of tender coconut at Kochi market ranged from Rs.15-25/- per nut. The monthly average price of tender coconut in Assam



Price behaviour of milling copra during July 2012

was Rs.14 per nut while it was Rs.16 in Tripura.

INTERNATIONAL PRICE

The monthly average price of US \$1040 per MT for coconut oil in Europe (C.I.F. Rotterdam) for the month of July 2012 was marginally lower when compared with the price of the previous month and lower by about 37 percent compared to that of the corresponding month last year. The monthly average price of US\$ 680 per MT for copra was marginally lower than that of the previous

month and about 59 percent lower than that of the corresponding month last year. The domestic price of US\$1120 for coconut oil at Kochi market was about 8 percent higher than that of the international price.

The domestic price of coconut oil during the month of July 2012, in Philippines was US\$11033 per MT and in Indonesia; the price was US\$938 per MT. The international price of palm oil, palm kernel oil and soybean oil were US\$1020 US\$1086 and US\$ 1243 per MT respectively.

Market Price

Date	Coconut Oil			Milling Copra				Edible Copra	Ball Copra			Dry coconut	Coconut	Partially dehusked coconut						
	Rs./Qtl.																Rs./1000 nuts			
	Kochi	Alappuzha	Kozhikode	Kochi (FAQ)	Alappuzha (Rasi Copra)	Kozhikode	Karkala	Kozhikode	Kozhikode	Tiptur	Bangalore	Arsikere	Kozhikode	Nedumangad	Arsikere	Bangalore	Mangalore (Grade-1)			
7-7-12	6258	6333	6383	4192	4192	4133	4200	5254	4625	5320	5280	5287	4783	5583	5683	6000	9500			
14-7-12	6200	6200	6350	4150	4142	4092	4300	5192	4583	5281	5280	5258	4778	5958	6333	6000	9500			
21-7-12	6200	6200	6350	4150	4150	4075	4267	5146	4675	5358	5487	5263	4975	5833	5454	6100	9500			
28-7-12	6200	6200	6375	4183	4150	4163	4133	5367	4742	5304	5300	5260	4833	5167	5500	5500	9367			
31-7-12	6175	6200	6375	4200	4150	4150	4000	5388	4800	5300	5300	5200	4750	5000	5000	5500	9600			
Average	6207	6227	6367	4175	4157	4123	4180	5269	4685	5313	5329	5254	4824	5508	5594	5820	9493			

Source: Kochi: Cochin Oil Merchants Association and Chamber of Commerce, Kochi - 2, Kozhikode: The Mathrubhumi daily Alappuzha: The Malayala Manorama daily, Arsikere : APMC, Arsikere Price quoted for office pass copra at Kozhikode and Rasi copra at Alappuzha markets. NT : No transaction