

Indian Coconut Journal



Farmer collectives to combat price fall

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Articles, research papers and letters on different aspects of coconut cultivation and industry are invited for publication in this Journal. All accepted material will be paid for. The Board does not accept responsibility for views expressed by contributors in this Journal. All remittances and correspondence should be addressed to the Chairman, Coconut Development Board, Kochi - 682 011.

Coconut Development Board

The Coconut Development Board is a statutory body established by the Government of India for the integrated development of coconut cultivation and industry in the country. The Board which came into existence on 12th January, 1981, functions under the administrative control of the Ministry of Agriculture, Government of India, with its headquarters at Kochi in Kerala State and Regional Offices at Bangalore, Chennai and Guwahati. There are six State Centres situated in the states of Orissa, West Bengal, Bihar, Maharashtra and Andhra Pradesh and in the Union Territory of Andaman & Nicobar Islands. DSP Farms are located at Neriyaamangalam (Kerala), Vegiwada (Andhra Pradesh), Kondagaon (Chhattisgarh), Madehpura (Bihar), Abhayapuri (Assam), Pitapalli (Orissa), Mandya (Karnataka), Palghar (Maharashtra) and Dhali (Tamil Nadu) besides a Market Development cum Information Centre at Delhi. The Board has set up a Technology Development Centre at Vazhakulam near Aluva in Kerala.

Functions

□ Adopting measures for the development of coconut industry.
□ Recommending measures for improving marketing of coconut and its products. □ Imparting technical advice to those engaged in coconut cultivation and industry. □ Providing financial and other assistance for expansion of area under coconut. □ Encouraging adoption of modern technologies for processing of coconut and its products. □ Adopting measures to get incentive prices for coconut and its products. □ Recommending measures for regulating imports and exports of coconut and its products. □ Fixing grades, specifications and standards for coconut and its products. □ Financing suitable schemes to increase the production of coconut and to improve the quality and yield of coconut.

□ Assisting, encouraging, promoting and financing agricultural, technological, industrial or economic research on coconut and its products. □ Financing suitable schemes where coconut is grown on large scale so as to increase the production of coconut and to improve its quality and yield and for this purpose evolving schemes for award of prizes or grant of incentives to growers of coconut and the manufacturers of its products and for providing marketing facilities for coconut and its products. □ Collecting statistics on production, processing and marketing of coconut and its products and publishing them. □ Undertaking publicity activities and publishing books and periodicals on coconut and its products.

The development programmes implemented by the Board under the project Integrated Development of Coconut Industry in India are- production and distribution of planting material, expansion of area under coconut, integrated farming for productivity improvement, technology demonstration, market promotion and Information and Information Technology. Under the Technology Mission on Coconut, the programmes implemented by the Board are development, demonstration and adoption of technologies for management of insect pest and disease affected coconut gardens, development and adoption of technologies for processing and product diversification and market research and promotion.

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Let us energize the FPOs for value addition, price stability and better returns to farmers

Dear coconut farmers,

This issue of Indian Coconut Journal is taking stock of the activities of Coconut Producer Companies formed in the country. Board had brought out an earlier issue on Coconut Producer Companies two years back, when the Companies were in their nascent stage. At present 37 Coconut Producer Companies are formed in the country. Out of this, 22 are in Kerala, six in Tamil Nadu, six in Karnataka and three in Andhra Pradesh. Coconut Producer Companies were first formed in Kerala during 2013-14 and on the basis of learnings from the first experience, scaled up to Andhra Pradesh, Karnataka and now to Tamil Nadu. Coconut farmers of Andhra Pradesh, Karnataka and Tamil Nadu are moving at a faster pace than the farmers of Kerala in formation of Coconut Producer Companies. The first producer company of Kerala was registered and started functioning in April 2013. Since the price of coconut was on a higher side since August 2013, many of the Producer Companies were not concentrating much on aggregation of coconut, copra or oil making. Perhaps they were enjoying the 'comfort zone' and expecting the prices to continue like that for ever.

Since middle of May 2015, we have been noticing some abnormal changes in the prices of copra and coconut oil and the sector was going through a phase of falling price. As the main harvesting season in Kerala was over by May - June and with the onset of south west monsoon, the arrival of copra into the market is much less. Hence the declining price trend during this season is quite unusual. When the arrivals of copra are low, there is every chance for copra prices to be either stable or to go up. In spite of these favorable factors, the prices were showing a declining trend.

The Marketing and Statistics departments of Coconut Development Board together analyzed this odd price trend and it was observed that neither economic principles nor any rational factors were behind this phenomenon. Suspected cartel formation by some big buyers is sounded as a reason for this artificial price fall. Usually the coconut oil price directly commensurate with the price of copra. The present price trend is not parallel and the declining price trend of copra is not in proportion with that of coconut oil. This is part of a trade mechanism wherein some suspected groups with vested interests are trying to create purposeful price fall of the raw material, purchasing it at a low cost and processing the same to finished product of which the price is kept high. Board had disseminated this information through print and electronic media and the farmers are cautioned about this strange price trend through

the FPOs. Now there is a temporary relief in the price fall and there is every reason to expect overall good price in the ensuing festival season during the next three months.

In order to resolve this problem, farmer collectives need to respond positively when the Board is publicizing the results of scientifically analysed market trend and overview of price scenario for 2 – 3 months. A team consisting of the officers of statistics and marketing division of the Board was guiding the farmers with probable responses from FPOs to cope with the distress situation. When the farmer collectives through their 'Consortium of Coconut Producer Companies in Kerala' took up the issue with the state Government, Government of Kerala responded very quickly to take favorable decisions to procure dehusked coconut @ Rs.25/kg. When the small and marginal farmers single handedly raised their protest at times of price fall, nobody was listening to them and the response from government was slow and lukewarm. Now when the farmer collectives are formed and once they started raising their issues through their FPOs, government, elected representatives and media are forced to give ears to the farmer's pleas, giving more and better attention by realizing the strength of collectives.

At present 8068 Coconut Producer Societies (CPSs), 586 Coconut Producers Federations (CPFes) and 37 Coconut Producer Companies (CPCs) are functioning in the country. If each Company had installed at least seven copra dryers each through the federations under them, there would have been around 250 modern copra dryers and 36 new oil expeller units in the country. But what they have achieved is far less. This indicates that Coconut Producer Companies have not yet developed confidence. If we could produce good quality copra by installing modern copra dryers, farmers would not have to sell their coconut at a distress price at times when copra prices are unreasonably manipulated by outsiders. If all Federations had installed modern copra dryers, they could procure coconut from their member farmers and could produce and market good quality copra both in the domestic and international markets. This wouldn't have given an opportunity to the external forces to dampen the price in the market. Board has been requesting each CPC to install sufficient modern copra dryers and expeller units so that better value addition and price stabilization can be achieved. Each federation was asked to set up copra dryers with a minimum capacity of 10,000 nuts per batch. So far only three companies have installed expeller units and are producing their own branded coconut oil. Last year when the price of coconut and copra were ruling high, many unscrupulous elements tried to adulterate coconut

oil to make a wind fall from its high market price. Since farmers were getting good price for coconut, our farmer collectives decided to remain idle or to be just onlookers. We could have taken advantage of the situation through production and marketing of pure, unadulterated good quality coconut oil thereby transferring the benefits back to member farmers. Board was expecting that at least 10 branded coconut oils will be made available in market by Coconut Producer Companies during this festive season. But as per the current rate of progress, it may take more time, say six to eight more months to reach the expected level.

Board has been persuading the farmer collectives since September 2014 to adopt various strategies for product diversification and preventive mechanisms to guard against price fall. Each CPC was asked to form seven sub committees under its Director Board. Committees for equity mobilization, nursery operations, copra & coconut oil and Neera production are the most important ones among them. While equity mobilization committee is performing well and even the Neera committees have made good advancement, other committees are moving at snail's pace. Hereinafter let us foresee the adverse situations that are likely to occur in future to dampen the coconut price and work collectively to undertake shared responsibilities, think positively and bring in new and innovative ideas into action.

Cyclic change in prices is likely to occur in any agriculture crop. When MSP is declared in advance and government procurement mechanism put in place for crops like rice and wheat, there is not much fall in the prices of these produces during harvest season. The fluctuating price trend of ups and downs is observed in the case of all other crops. Seasonal behaviour, short term and long term trend, cycles and unexpected random behaviour are components of a time series. The statistics team of CDB was trying to study the data on prices of coconut oil and copra for the past three decades to decipher the cyclicity, trend, seasonal behaviour and random variations in it. With the information they gathered, prediction of future behaviour of the price was made and compared with current patterns in price. They shared their inferences with the readers of Indian Coconut Journal through an article published in the June 2015 issue. They made an econometric analysis of copra, coconut oil price during the last three decades. It is realized that the changing price trend can be known well ahead to a reasonable extent and the farmers can even take up measures to combat the same. One of the prime responsibilities of the farmer collectives is to equip themselves to respond to the normally occurring price fluctuations. This mechanism to study the market behaviour in copra price helped the CDB team to notice and detect abnormal behavior and external interference through cartel formation of big buyers of copra

With few weeks of careful observation and monitoring of the market parameters such as price, quantity arrived in the markets, number of buyers, change in number of buyers etc. CDB team could notice abnormal interventions in the market price. They informed this fact to coconut farmers through FPOs. Producer companies took up this with State Government and representatives of people requesting for supporting measures to help farmers. Strong protest against the foul play can definitely ward them off. This doesn't mean that there won't be fluctuations in coconut price in future. Even during fluctuations of copra and oil price, farmers can be assured of a fair, reasonable and steady price through collective procurement, processing and value addition and let this be the first strategy to be taken up by the FPOs.

The second strategy is to plant maximum dwarf, high yielding and early bearing coconut varieties, producing and marketing maximum value added coconut products particularly Neera and its value added products from both in the domestic and international markets. Compared to the previous year, 402% increase is recorded in the export of Virgin Coconut Oil (VCO) in 2014-15. The first quarter of 2015-16 has witnessed an increase of 586% in the export of VCO compared to the same period of 2014-15. This growth could have been more than 1000% if we had produced more VCO. Can we take this as a third strategy for the immediate attention of the FPOs to concentrate on products such as VCO. As informed earlier, when hardly 20 Indian districts are using coconut oil for edible purpose, almost all Indian districts are using coconut milk for culinary purposes. Let us transfer this knowledge to FPOs and transform them to realize the potential of this sector and let us begin exploring the industrial opportunities available in coconut milk and its derivatives. Right now this segment is fully catered by imports in our country showing that there is great opportunity for FPOs and other entrepreneurs.

Even though Board had given clear instructions about employing good technical and management professionals in CPCs, only few of the CPCs have deployed Chief Executive Officers. Lack of technical and managerial professionals is slowing down the pace of growth of CPCs. Although Chairman and Board of Directors of CPCs can definitely bring new ideas and lead the member farmers, services of professionals are most vital in executing these ideas successfully. Our efforts could be termed successful only when efficient 'Team Work' by leadership of farmers and professionals with good education, expertise and experience become a reality. I call upon all Coconut Producer Companies to achieve this goal soon.

With regards



TK Jose
Chairman

Coconut Producer collectives- a platform to address the challenges of farmers

● **R Jnanadevan**, Deputy Director, CDB, Kochi-11

Organizing the unorganized coconut sector through farmer's collectives is one of the most key activities initiated by Coconut Development Board during the 12th five year plan period. CDB has been facilitating the formation and hand holding of FPOs since the last four years. With the strenuous efforts taken by the Board, aggregation of primary coconut producers, especially small and marginal farmers into producer collectives has now become a reality. The primary objective of mobilizing farmers into member-owned producer organizations is to enhance production, productivity and promote economically desirable processing, marketing and to enhance profitability of coconut farming, especially the small farmers of the country. The producer's collective's need to be strengthened and they will be facilitated to access forward linkages with regard to technology for enhanced productivity, value addition of feasible products and market tie-ups. The participant farmers will be given necessary support to identify appropriate production and protection technologies for increasing production by optimum use of inputs and use of intercrop relevant to their coconut garden. Coconut farmers are organized into a three tier farmer collectives viz. CPS at grass root level, CPF at the middle level and Producer companies at the top level for improved input and output market access as well as negotiating power.

Genesis of coconut producer's collectives

CDB initiated formation of CPS in 2009-10 in Kerala and 112 CPSs

were formed during the year. Scaling up of CPSs formation to all districts of Kerala was continued and 1158 CPSs were established in 2010-11. In 2012-13, CPSs were formed in Tamilnadu, Karnataka and Andhra Pradesh and integration of CPS to form CPF in Kerala was also started. Formation of Coconut Producer Companies was also initiated in 2013-14 and 17 Coconut Producer Companies (CPC) were established in the country.

Coconut Board is on the way of scaling up the farmer collectives to non-traditional states of Assam, Odisha, Maharashtra, and West Bengal in 2014-15. Presently 36 coconut producer companies have been registered and are functioning in the major coconut producing states viz. Kerala (21), Tamil Nadu(6), Karnataka(6) and Andhra Pradesh(3) with a total share capital of Rs.25 crores contributed by the farmers. Unlike other companies the coconut farmer producer companies are formed by the farmers, for the farmers and owned by them. Primary coconut producers or the farmers are the owners of the company. It functions like any other private limited company with the only difference being that the profit accrued flows back to the farmers who own the company. These FPOs act as economically viable, democratic and self governing Farmer Producer Organizations (FPOs) by extending various services to farmers in production, processing and marketing.

FPOs- the implementing agency

Coconut producer's collectives can act as an implementing agency for implementing various



development programmes implemented by government agencies. The main qualifying criterion for an FPO to attract benefits under various schemes and programmes of the Central and State Government is that it must be a body registered and administered by farmers focused on activities in production, processing and marketing and allied activities. The formation and development of FPOs will be actively encouraged and supported by the Central and State Governments and their agencies, using financial resources from various centrally sponsored and State-funded schemes in agriculture sector agencies. This goal will be achieved by creating a good relationship with other state and central government agencies involved in agriculture development. CDB has been implementing a massive Replanting & Rejuvenation of coconut gardens, the scheme for laying out of demonstration plot and establishment of organic manure units through these farmer collectives since 2013-14. Selection of beneficiaries, collection of applicants, field verification, recommendation of financial assistance and distribution of inputs under the scheme are done by the FPOs.

Production & distribution of coconut seedlings

Production and distribution of good quality coconut seedlings is one of the thrust areas identified by Board to ensure supply of quality planting material to meet the heavy demand of farmers. It is one of the burning problems faced by the farmers. Coconut seedlings produced by CDB and the state and central agencies have limitations and about 35% of the total demand is met from these sources. Hence one of the alternate source promoted by the Board is raising decentralized coconut nurseries by the FPOs in local areas which are more accessible to the farmers. With emergence of FPOs, federations can take up the responsibility of delivering quality planting materials to all CPSs under them by maintaining own nursery.

The number of decentralized nurseries are increasing year by year. During 2015-16, it is projected to produce more than three lakh quality coconut seedlings from these nurseries. CDB proposed to accredit these nurseries based on their performance and this could become a permanent source of quality coconut seedlings in future. This would not only give way to better productivity and quality, but will also invoke a sense of ownership among the farmers.

Processing and marketing activities

Farmer producer organization should start coconut processing units to promote economically desirable product diversification in coconut. Based on the availability of raw material, this can be procured from the member farmer. Suitable processing facility should be created with the technical and financial support of the Board. Production of good quality FAQ copra, good

quality coconut chips, Neera and Neera based products, vinegar, virgin coconut oil, coconut milk powder units, coconut defibre units and mushroom cultivation using coconut waste are some of the value added product based processing activities that can be taken up by the FPOs.

FPOs can facilitate linkages between farmers, processors, traders, and retailers to coordinate supply and demand and to access key business development services such as market information, input supplies, and export of coconut products. The FPO can also procure agriculture produce other than coconut from its member farmers; can do the storage, value addition and packaging. The FPOs can also do the direct marketing after procurement of agricultural produce. This will enable members to save in terms of time, transaction costs, weight losses, distress sales, price fluctuations, transportation, quality maintenance etc.

Now CDB has made the three tier farmers at sizeable numbers in major coconut growing states. These collectives should act as a platform for doing activities, procure agricultural products and sell them to the members, supply inputs such as seed, fertilizer and machinery, market linkages, training & networking and financial and technical advice etc. They can also act as a procurement agency to undertake price support operations under Minimum Support Price (MSP) for coconut at the time of price fall. FPO should promote best practices of farming, maintain marketing information system, diversifying and raising levels of knowledge and skills in agricultural production and post-harvest processing that adds value to products.

Other activities

Based on the emerging needs, FPOs will keep on adding new services from time to time. The set of services include financial, business and welfare services. Coconut Producers Companies on reaching sustainable stage can extend financial services also to its members. In the long run, FPOs can provide loans for crops, purchase of tractors, pump sets, construction of wells and laying of pipelines. The FPOs will also provide low cost and quality inputs, fertilizers, pesticides, seeds, sprayers, pump sets, accessories, pipelines etc to member farmers.

To sum up, Coconut Producer Companies have an inevitable promising future in the present day liberalized economy. They can perform various activities using the collective strength as described above. But the attitude of the members of the company will have to be drastically changed in order to ensure a cooperative identity in a new environment in all spheres of its activity. The members of the companies will have to be given more attention to meet their needs through collective efforts. Management pattern of the company will require greater professionalization and managerial efficiency. ■

Producer Companies progressing towards the dream

● **K.S. Sebastian**, Assistant Director, Export Promotion, CDB, Kochi-11

Producer Companies (PC)

Primary producers' organisations or collectives are thought to be the only institutions which can protect small and marginal farmers from the ill-effects of globalization and make them participate successfully in the present competitive society. Producers' organizations help farmers buy or sell better due to scale of economy benefits. It also lowers transaction costs for sellers and buyers, besides providing technical help in production and creating social capital.

In India, there are many legal forms of organisations that the primary producer can organise themselves into. A Producer Company (PC) is one such and relatively new legal entity of producers, of any kind, viz. agricultural produce, forest produce or any other local produce. PC as a legal entity was sanctioned in 2003 as per section IXA of the Indian Companies Act 1956. Since the enactment of the above section, PCs have been hailed as the organizational form that will empower and improve the bargaining power, net incomes and quality of life of small and marginal farmers in India. While each member in a PC can have only one vote, he can contribute different amounts of share capital to the PC. The shares of the PC members cannot be transferred outside the membership. A PC should either have a minimum of 10 members or two producer entities or a combination of both. By virtue of assigning equal voting rights to each member, the issues of management control by small and marginal producers have been resolved in the design of PC.

Coconut Producer Companies (CPC)

For Coconut Development Board promoted PCs, 'Primary Producer' means farmer with not less than 10 yielding coconut palms. A producer company is a hybrid between a private limited company and a cooperative society. It combines the benefits of a cooperative enterprise and the vibrancy and efficiency of a company. The members of the Company are the shareholders and the primary beneficiaries. The business operations are run professionally through the appointed Board, CEO and office bearers.

Stakeholders of producer companies formed throughout India in agriculture sector are medium and large scale farmers. However in coconut sector, almost all the shareholders of the companies are small and marginal farmers. Here instead of farmers becoming shareholders of the companies, their collectives viz. Coconut Producer Societies become shareholders of the companies. This would give opportunity for all coconut farmers irrespective of their holding size to become stakeholders of the company.

The formation of Coconut Producer Companies in India is getting rooted in major coconut growing states. 36 Coconut Producer Companies are already formed in the country across the southern states. It is expected that 50 companies would be formed by the end of this financial year. All these companies are formed and registered with the Registrar of Companies and most of the companies are having Rupees five crore as authorised capital. Farmers are given shares proportional to the number of coconut palms they possess.

State	No. of CPCs
Kerala	21
Karnataka	6
Tamil Nadu	6
Andhra Pradesh	3
Total	36

The Business Plan is Getting Ready

Capital mobilization of the company is gaining momentum. It is expected that by the end of the financial year 2015-16, the companies would be able to fully mobilize the authorised capital. Each company is making their distinct business plans by taking into account the local, domestic and international situations. The services of domain experts are also being availed for this purpose. Initially, the companies are supposed to focus on producing a main product and subsequently to more products and by-products. Pure coconut oil, virgin coconut oil, desiccated coconut powder and Neera and Neera products are the various coconut products which

are planned immediately. The processing units of the companies are of moderate capacity so that the product could make a visibility in the market. The envisaged processing capacities of the units of the companies in the initial stages are given below.

Main Product	Minimum Daily Processing Capacity
Coconut Oil	5MT
Virgin Coconut Oil	2MT
Desiccated Coconut	2.5MT
Neera	10,000 L

The existing huge domestic and international demand is the reason for selecting these products. Pure coconut oil and neera has got a very good domestic market where as



virgin coconut oil and desiccated coconut has got huge demand in the international market. Since the domestic price of coconut oil is higher than its international price, the companies should focus more in domestic markets rather than the

international market. However coconut oil in consumer packs of up to 5kg is having huge demand in gulf countries and in countries having large ethnic population. These consumer packs can fetch very good prices as well. During the previous financial year(2014-15) coconut oil exported in consumer packs fetched an average value of Rs.212 per kg which is almost three times more than that of the international price of coconut oil.

As a pure natural health drink neera is also expected to have good demand in the international market. Furthermore being a low glycemic index sugar produced from neera could easily find a place in the European and US markets. The frequent enquiries receiving for neera sugar is a positive indication of a prosperous market for the product. Neera sugar has been able to gain worldwide attention due to its presumably inert effect on blood sugar levels.



Virgin coconut oil is another product that can generate maximum profit for the producer. The product is having a growing US and European market and exporters could easily fetch US \$ 5 to 10 per kilogram for virgin coconut oil. Virgin coconut oil is one of the most profitable products



in the international market. Once ornately packed and exported for the direct use of consumers, virgin coconut oil is bound to fetch a whopping sum equal to 10 US \$ per kilogram. In the year 2013-14 virgin coconut oil worth Rs.5crore was exported from our country, succeeded by an escalated Rs.25 crore in the year 2014-15. It is estimated that this would touch Rs. 60 crores in 2015-16. The export of virgin coconut oil which is presently less than 1000 metric tonnes is expected to reach a whopping 10000 metric tons within few years.

Desiccated coconut powder is a product which has got an export market of three lakh metric tonne. While Philippines which occupies the 2nd position among coconut producing nations control 60% of this trade, Indonesia which is the 3rd largest coconut producing nation owes a share of nearly 40%. Sri Lanka a country with about 10% of India's total coconut production accounts for 12% of this trade



whereas India, the global leader in coconut production just contributes to a staggering 1.5%. Since these products have a huge domestic demand, Indian producers are blind towards its appeal and possibilities in international market. Indian desiccated coconut powder which has got price competitiveness in international market can capture a sizable share of it if we can comply with international standards. Vittal Agro Industries, an ISO 22000 certified Kerala based desiccated coconut powder manufacturer has succeeded in producing high quality products complying with international standards. The company

which has ISO certification is currently exporting 200 metric tonnes of desiccated coconut powder monthly. If we are able to set up a dozen such units, we will be able to equal Sri Lanka in desiccated coconut powder export. Coconut Producer Companies has included desiccated coconut powder in their product basket by keeping an eye on this potential export market.

Increased income from by products

Coconut oil producing units can effectively utilize the discarded coconut shells for manufacturing ice cream cups, bird's feeders, bird's nest etc which have a high value in the international market. An oval shaped half coconut shell with eight inch coir string is fetching good price in the export market. A considerable income can be obtained through these processes. Units producing virgin coconut oil and desiccated coconut powder can utilise the coconut water for export or for manufacturing various products like vinegar, aerated drinks etc. Mature coconut water exporters are meeting their requirements from desiccated and virgin coconut oil processing units.

Companies which are setting up neera processing units are also venturing into various neera by-products



like honey, jaggery, sugar etc. which can help in adding more revenue to the company. Neera sugar being a better substitute for alternate sugar, it could capture lion's share of alternate sugar's existing market.

Boundless horizon

No restrictions are on the company's activities in the agriculture front. The companies should act as a window for the development and upbringing of agriculture sector. The companies would distribute seeds, seedlings, fertilizers and agricultural implements on a reasonable price. Companies could very well act as conduit for channelizing government support directly to the farmers through various schemes as could be proved by the implementation of the mega scheme in coconut sector viz. Rejuvenation and Replanting of coconut.

The enthusiasm rendered for the establishment of coconut farmer collectives such as coconut producer's society, its federation and producer companies is appreciated and is much expected in the forthcoming stages as well. Companies that function systematically are assured of full support through various government schemes. Since both the state and central government have come up with grants and financial support for these companies, it is expected that they function systematically, fruitfully and honestly from their part. Since the companies are business initiatives, individuals capable to run them efficiently are to be identified and given key positions. It is sure that once the Coconut Producer Companies envisaged activities become operational and coconut farmers could enhance their income, the current situation of price volatility could be lessened and export of coconut products could be made manifold. ■



CDB launches Neera

Neera, processed and packed by Institute of Technology (CIT) Vazhakkulam of Coconut Development Board was launched at CDB headquarters in Kochi on 16th July 2015. Shri. P.C. Cyriac IAS (Rtd.), Former Additional Chief Secretary, Tamil Nadu, launched CDB Neera by presenting it to Mr. S. Balakrishnan, Former President, Apex Council, Ernakulam Resident's Association. Mr. T.K. Jose IAS, Chairman, CDB, Mr. Jijo John, Principal, SRV High School, Mr. Sugata Ghose, Chief Coconut Development Officer and Dr. A.K. Nandi, Secretary, CDB were present at the function.

When State Government promised Rs. 10 crore, coconut farmers mobilize equity of over Rs. 20 crore

● **Rupak G Madassery**, Project Manager, CDB, Kochi-11

It was in April 2015 that Government of Kerala released the order allotting Rs. 10 crore, as equity grant to Coconut Producer Companies (CPC) in the state. A Coconut Producer company will be granted 25% of the equity mobilized by farmers, subject to a maximum limit of Rs. 50 lakhs whichever is low, as equity contribution through Kerala Financial Corporation. Since the issuance of this directive of the Government of Kerala, the equity mobilization of the CPCs has become more intense. As a result, the member farmers of Coconut Producer Companies have mobilized equity of over Rs 20 crore during June-July 2015.

If order to make maximum use of this one time opportunity provided by the Government of Kerala, each company need to mobilize a minimum of Rs. two crore as equity. Such an effort can be made successful only through the collective efforts of coconut Farmer Producer Organizations which are affiliated to the Producer Companies. The three tier structure of Coconut Producer Companies help the farmers to conduct campaigns in a more organized and effective manner. Awareness creation regarding the Company's need for collecting maximum equity for undertaking various projects and the urgency for mobilizing the same was spread to thousands of member farmers of the Company through various campaigns. Thus when the state government promised Rs. 10 crore as equity in the budget, CPCs in Kerala mobilized an equity of over Rs. 20 crore.

Even before the state government issued this order, few of the CPCs had already mobilized Rs. two

crore as equity. Palakkad Coconut Producer Company Ltd, Kuttiady Coconut Producer Company Ltd and Kaipuzha Coconut Producer Company Ltd reached this milestone well in advance. A Company which exhibited a steady growth in mobilizing equity was Thirukochi Coconut Producer Company Ltd. The company started its equity mobilization campaign during April 2015 with only Rs. 60 lakhs as equity. After the intensive campaign, farmers bought shares worth Rs. one crore in the company, thereby raising equity to Rs. 1.6 crore. Efforts are being made to raise this amount to Rs. two crore by the middle of August 2015.

Tirur Coconut Producer Company Ltd, Malappuram district, the 19th CPC registered in Kerala, has made a remarkable achievement in mobilizing huge equity in a short period of time. During the month of May 2015, equity of Rs. five lakh was mobilized by the promoters. During June-July 2015, the company collected shares worth Rs. 1.25 crore. A brochure on the mission, objectives and the projects to be implemented by the company was distributed to all farmers through CPFs and CPSs. This improved the confidence level of farmers which boosted the equity to Rs. 1.30 crore. The equity mobilization subcommittee expects to raise this amount to Rs. two crore by the middle of August 2015. This is a typical example of how inclusive growth can help a Farmer Producer Organization (FPO) to prosper.

A similar strategy was adopted by Kadathanad Coconut Producer Company Ltd of Kozhikode district. This company was registered during March 2015 with an equity

of only Rs. 26 lakh. As a result of an intensive campaign, this equity was raised to Rs. 110 crore. The various projects which are going to be taken up by the company along with required financial budget was prepared and presented in attractive brochures and distributed to all farmers through CPFs and CPSs.

Onattukara Coconut Producer Company Ltd, the 14th CPC to get registered in Kerala had initially mobilized an equity of Rs. 6 lakh for registration. The strategy adopted by them for the campaign was bit different from other companies mentioned earlier. The equity mobilization subcommittee of the company made direct interaction with its member farmers by conducting meetings in CPFs and CPSs. This resulted in equity mobilization of Onattukara CPC rising to Rs. 86 lakh. Vadakara Coconut Producer Company Ltd, the 21st CPC in Kerala too adopted the same strategy, but in addition, made a one to one interaction with farmer households. The company was formed with just five CPFs and then later two more CPFs joined the company. Such deep involvement, participation and inclusiveness of farmers resulted in boosting their equity to Rs. 1.65 crore.

Ponnani Coconut Producer Company Ltd, the 20th CPC in Kerala, also adopted this strategy and was successful in mobilizing an equity of Rs. 70 lakh during July 2015. Even when the company is under the process of registration, the company plans to implement projects on various value added products of coconut and create awareness about the possibilities and benefits of member farmers. Thus, they are successful in winning

their trust and have converted this trust into equity mobilization. Tejaswini Coconut Producer Company Ltd and Kozhikode Coconut Producer Company Ltd are the other CPCs which have mobilized reasonable equity of over Rs. one crore.

Since majority of the coconut farmers in Kerala are small and marginal farmers, such performance from Farmer Producer Organizations in coconut sector is worthy of note. This is also due to a realization by farmers that there is need to urgently raise their equity to a minimum of Rs. two crore and utilize this

opportunity to obtain maximum assistance from the state government. CPCs in Tamilnadu, Karnataka and Andhra Pradesh are also in the process of mobilizing equity shares. From such collective efforts, it is evident that a lot can be achieved when there is unity and teamwork. Let this program be a model to CPCs of other states and also to FPOs of other agricultural crops. If farmer collectives in other states also receive similar support from respective state governments, it will tremendously contribute towards the overall growth and development of agricultural sector especially in rural India. ■

Coconut farmers undergo training at IIM

For the first time in history, farmers of a Producer Company underwent a training from one of the most prestigious Management institutions of India. A Farmer Producer Organization in coconut sector named Perambra Coconut Producer Company Ltd conducted a Management Development workshop for presidents of all Coconut Producer Societies (CPS) affiliated to the CPC at IIM, Kozhikode. They are the ones who lead the farmers at the grass root level. Every activity taken up by CPC is implemented through CPC. The Board of directors of Perambra CPC realized the importance of good management principles which has to be adopted by these leaders at the grass root level of the company. The ultimate purpose of this program was to infuse in them a sense of leadership and responsibility in order to influence

and lead a group of farmers towards a common goal.

The presidents of 200 Coconut Producer Societies participated in the one day workshop. Dr. Radha Krishnan, Dean Administration, IIM Kozhikode inaugurated the programme. The program was co-ordinated by Dr. Om Kumar Krishnan, Associate Professor, Marketing Management, IIM. Smt. Priya Nair Rajeev, Associate Professor, Organizational Behavior and Human resources and Shri. Manoj Menon, Assistant Professor, Rajagiri Business School were the other trainers. How to work in a team of individuals with different interests and opinions, how to market products manufactured by the company etc were the topics discussed in different sessions of the programme.

Perambra CPC organized this programme with the financial

assistance of Chakkittapara Cooperative bank in Kozhikode district through NABARD's Producer Organization Promoting Institution (POPI) scheme. Shri. N. Ramesh, General Manager, NABARD, Shri. James P. George, Assistant General Manager, NABARD and Shri. Rajagopalan, Chief Manager, State Bank of Travancore also addressed the participants. Coconut Development Board (CDB) appreciates Perambra CPC for conducting a first of its kind management development workshop to benefit coconut farmers. CDB also encourage other CPCs to organize such training programs for the leaders of CPFs and CPSs. Perambra CPC is now looking forward to a bright future, right from equity mobilization to commercial production of various value added products of coconut.



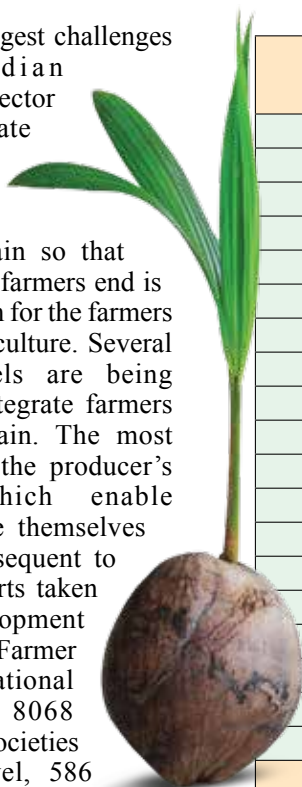
Farmers of Perambra CPC undergoing training at IIM Kozhikode

FPOs gearing up to bridge the demand supply gap in dwarf coconut seedlings

● **Pramod P Kurian**, Assistant Director, Coconut Development Board, Kochi-11

One of the biggest challenges of Indian agriculture sector is how to integrate farmers, especially the small and marginal farmers with the value chain so that the net return at the farmers end is remunerative enough for the farmers to stay back in agriculture. Several institutional models are being tried in India to integrate farmers with the value chain. The most common model is the producer's cooperatives, which enable farmers to organise themselves as collectives. Subsequent to the continuous efforts taken by Coconut Development Board, the three tier Farmer Producer Organizational structure with 8068 Coconut Producer Societies in the bottom level, 586 Coconut Producers Federations in the middle level and 36 Coconut Producer Companies at the apex level is formed in the country now.

Coconut Development Board continuously requested the Coconut Producer Societies, Federations and Companies to initiate the production of quality dwarf coconut seedlings. On realizing the necessity of producing dwarf coconut seedlings suitable for producing various coconut products many of the FPOs started establishing dwarf coconut nurseries. A reason for FPOs restraining from establishing dwarf coconut nursery was the non availability of good dwarf nuts from seed gardens. Understanding this difficulty, Coconut Development Board identified suitable dwarf coconut seed gardens in the states of Tamil Nadu, Karnataka, and



Company Name	Seedling Production (Nos)
Palakkad	45000
Kuttiady	30000
Kaipuzha	7000
Thirukochi	10000
Vadakara	13500
Tirur	30500
Tejaswini	30000
Kozhikode	10000
Kadathanad	30000
Kodungallur	25180
Karappuram	3900
Koyilandy	20000
Nilambur	15500
Perambra	15200
Ponnani	10000
Thamarassery	20000
Kottayam	10000
Pathanamthitta	10000
Idukki	6500
Total	342280

Andhra Pradesh enabling the farmer collectives to procure seednuts from these sources. Board has posted the details of these gardens in its website, www.coconutboard.nic.in.

Even after repeated persuasion and follow ups from Board's side, Coconut Producer Societies, Federations and Companies are still reluctant to start dwarf coconut nurseries of their own and depend on Board's DSP Farms for dwarf coconut seedlings. The Farm Manager of DSP Farm, Neriyaamangalam, Kerala has taken necessary steps to produce 3.25 lakh seedlings during the current year. Under the scheme, Replanting and Rejuvenation of coconut Gardens, Board is committed to produce and distribute a large number of coconut dwarf seedlings to the beneficiaries.

Hence the Board finds it very difficult to provide seedlings to all the needy farmers. The dwarf seedling production by state machineries is also meager.

Since the demand supply gap is so wide, Coconut Development Board is prompting and giving target to the Farmer Producer Organisations to produce maximum dwarf coconut seedlings. Since 365 Coconut Producer Federations were formed in Kerala during March 2015, Board, fixed a target of sowing 10000 seed nuts per Federation for a minimum of 300 federation expecting to produce 18 lakhs quality dwarf coconut seedlings in the coming two years. The subject was seriously discussed during the monthly company review meetings held at Coconut Development Board. Slowly the procurement and sowing of dwarf seed nuts by Coconut Farmer Producer Companies have started picking up. So far, around 3.5 lakhs dwarf seed coconuts were procured and sown by the Producer Companies across Kerala under the technical guidance of Board. The details of the production of seedlings by the Producer Companies in Kerala is shown in Table .

The outcome of this initiation of Coconut Development Board is expected to start yielding result from 2019 onwards enhancing the production of coconut suitable for tender coconut, extra virgin coconut oil, coconut milk, neera etc. Our products will have good demand both in domestic and international markets. Coconut Development Board dreams of a day when well educated youth including females tap Neera and the small statured coconut palm offers a better reward than paid by any MNC. "Arise and pursue your dreams." ■

Noveeal CPC Ltd- aiming for sustainability in coconut farming in Andhra Pradesh

● Rama Chandra Raju Dantuluri, *Chairman, Noveeal CPC Ltd, East Godavari, Andhra Pradesh*

East Godavari district is located in the north coastal part of the state of Andhra Pradesh. The district is known as the rice bowl of Andhra Pradesh with lush paddy fields and coconut groves. Total agricultural area of the district is 5.11 lakh ha, from which coconut occupies an area of 50,167 ha with an annual production of 7299.65 lakh nuts. The district stands first in area and production of coconut among other coconut growing districts but value addition of coconut is very negligible in the area. A major part of the coconut produced in the state is utilized for making ball copra and also for supplying to other states as mature coconut.

Natural calamities like cyclone and flood are common phenomenon in the coastal districts of Andhra Pradesh. Frequent occurrence of cyclone increased the incidence of mite in coconut gardens, which in turn reduces the size of nuts. These climatic changes badly affect majority of farmers, especially those who are depending on coconut as their source of livelihood. The common variety grown in the area is East Coast Tall. The average price of coconut in East Godavari usually ranges between Rs. four and Rs. eight per nut. Initially when CDB initiated the three tier system of FPOs, viz. CPS, CPF and CPC, there were few takers to this concept. It was always a challenge to form collectives among the coconut farmers who are skeptical to Government sponsored programmes. Along with Board officials, village level meetings were called for and the farmers were briefed about the advantages of collectives in aggregation, primary processing, value addition



Farmer's meeting of Noveeal CPC

and collective bargaining in the sector. The priority given to FPOs in implementing CDB schemes also helped the farmer leaders to motivate the farmers gradually.

The effects of sustained campaigning bear its outcome in the registration of Naidu Coconut Producer Society during January 2014. Persuading the adjacent villages to join the collectives was the next step. The effect of forming more collectives spread to the entire district and to all the major mandals like Amalapuram, Allavaram, Katerinikona, Mummdivaram, Pollavaram, Ainavalli, Ravulpalem etc formed CPS. As the next step, about 107 CPSs were integrated to form eight CPFs during March 2015. So far 170 CPS are formed under the active leadership of farmers and formation of four CPFs are in progress. Finally, the company was registered on 29th May 2015 with an authorized capital of 5 crores.

The main objective of the CPC is to become the processing hub of coconut which in turn can help the member farmers to realize the true value of coconut. M/s Noveeal is the third coconut producer company formed in Andhra Pradesh and the 29th CPC registered with

Coconut Development Board. The head quarter of the company is at Amalapuram, East Godavari. Amalapuram is one among the major market places for agricultural produces especially coconut products in Andhra Pradesh. The CPC aims to bring in more than 12 lakhs yielding palms in its area of operation and this will be achieved during this financial year itself.

Programmes and activities undertaken

The Laying out of demonstration plot (LODP) scheme in East Godavari district is implemented through the federated CPSs during 2014-15. 75 CPSs in the company were covered under LODP thereby benefiting 3111 farmers. Input worth Rs 190 lakhs has been distributed to the farmers. With the timely support and guidance of the Board, farmers started to follow the scientific package of practices

M/s Noveeal CPC was registered with an authorized capital of five crores. A transparent system of share mobilization is being practiced by the CPC. All the farmers were motivated to donate one nut/palm/harvest (five harvest/year) and the process has already commenced.

The share mobilized by CPS is channelized through CPFs to the company account. So far Rs.35 lakhs has been mobilized and the company is targeting to mobilize at least Rs. three crore by the end of this fiscal year.

Functional and Sub committees

The company has constituted four committees viz. Committee for monitoring and implementing CDB schemes, Committee for share mobilization, committee for public relations and committee for FoCT and Neera Master technician training are in place to monitor the activities

Assistance of Technical and Managerial Professionals

Experts in agricultural and managerial field are a guiding force in the formation and activities of the company. The company has already appointed two technical hands for updating the day to day activities. The selection and appointment of management professional is in progress. All the field level data of the farmers under the company is digitalized CPS & CPF wise in order to have a data bank. The company is collaborating with experts in various fields. Dr. N Bharathi, Chairman, Grow more Biotech Ltd. Hosur, Dr. Ravi Chandra, expert in biotechnology, Dr. A Panduranga Rao, Retired professor, Bapatla Agricultural University and Dr. K Hemadri, specialized in medicinal plants are providing technical assistance to the company.

Future Thrust areas

The company is continuously interacting with CDB and State Department in connection with amendment of AP excise act 1968, so as to permit the federated CPS to tap, process and market Neera. A memorandum has been submitted to the Chief Minister seeking his immediate intervention in amending the act.

Company has started short listing candidates for FoCT and Neera technician training. 20 traditional Palmyra tappers have been identified and the company is planning to send them to CDB for Neera master technician training. In order to initiate FoCT training, CPC has taken a building on lease for providing residential facilities for convening the FoCT training.

Noveeal CPC Ltd. is planning to conduct Friends of Coconut Tree (FoCT) training with the financial and technical support of Coconut Development Board. This training is expected to create a collective aggregation of an active work force. In future the company can utilize the service of the trained FoCTs for undertaking hybridization and various activities in the region.

The Neera Technician Training will start in the company after the successful training of Master Technicians. Establishment of a Neera processing unit with all modern amenities will help the FPO to emulate the success model in Kerala. All the value added products can be processed under the auspices of the company.

Convergence of various central sector and state sector schemes are another area where CPC need to co-ordinate its activities. Cultivation of compatible intercrop for augmenting the income of farmers will also be given importance. Implementation of Coconut Palm Insurance Scheme will help the member farmers to minimize the risk of income loss due to sudden death of palms by insuring palms against natural and other perils.

The company has plans to have a market yard in each CPF for aggregation of nuts. Each CPFs will have a primary processing unit for ball copra with a capacity to process 10-15 lakh nuts annually. The progressive farmers in each CPFs will be motivated to establish seed gardens. The remodelling of coconut gardens in East Godavari with 25 percent dwarf palm suitable for tender nut is the need of the hour. Market yard in each federation is the dream project of Noveeal to aggregate the coconut produce of all the member farmers at one place. From the aggregated nuts in the market yard, 20 percent of very small nuts will be used for converting it into ball copra.

Ball copra is a profitable business in East Godavari district. The company is planning to start ball copra units which will help the farmers to get more profits from the nuts. This primary processing activity will also help in raising the equity of the company.

Noveeal CPC Ltd also has planned to establish Seed Garden and Nursery for selected federations by acquiring 30 acres of leased land. At present, farmers are more interested in cultivating tall varieties in East Godavari. Therefore remodeling of coconut gardens

is very essential in this area to popularize the tender and dwarf varieties. The CPC is targeting to convert 25 per cent of coconut palm population to dwarf varieties within five years, for that roughly around 2.5 lakh seedlings will be required. Establishment of seed garden and popularizing the dwarf varieties in field will ultimately aid in the production of hybrids in future. ■

Sl. No.	Name of CPF	No of CPS	No. of farmers	No. of bearing palms	Annual production of nuts	Average productivity (nuts/palm/year)
1	Kalpasree	14	571	97880	8199250	83.76
2	Universal	16	704	102333	9198895	89.89
3	Young Ever	12	489	69873	6690500	95.75
4	Joyfull	11	459	75847	6952150	91.66
5	Innovative	13	547	93547	8414970	84.87
6	Evergreen	14	570	88874	8174650	91.98
7	Green Tech	14	569	104454	9228810	88.35
8	Nature	13	530	109474	10540550	96.00
Total		107	4,439	7,42,282	6,73,99,775	



Chicacole CPC Ltd.

for ensuring a better socio-economic status to coconut farmers

● **Johar Khan**, *Chairman, Chicacole CPC Ltd, Srikakulam, Andhra Pradesh*

Chicacole CPC plans to initiate production and marketing of coconut Neera and its value added products once the excise rule is amended in Andhra Pradesh

Chicacole Coconut Farmers Producer Company Limited (CHICOF) is the first coconut producer company registered in Andhra Pradesh and the sixth CPC in the country. The company is established by forming 109 CPSs and 10 CPFs with 4959 small and marginal coconut farmers covering 10 lakh coconut palms in 12239 acres of land in the districts of Srikakulam. The prime objective of the company is to help the farmers achieve

high price to their agricultural commodities by way of organic production and processing and value addition of products without changing the inherent quality of the products, satisfying the consumer's expectation at its high level.

The company was registered during April 2014 under Indian Company Act 1956 with a total authorized capital of Rs. five lakhs and paid-up capital of Rs. three crores by way of farmer equity



Farmers Meeting - Borivanka

and with the help of Central and State Government institutions. For the effective functioning of the company, farmer equity is proposed to mobilize with a matching equity from the State Government as assistance. Company collected Rs. 80 lakhs as farmer equity out of the target of Rs. 1.75 crores.

The head quarters of the company is at Kavity, Srikakulam, Andhra Pradesh. Srikakulam, is covered with a thick layer of traditional coconut plantation and is one of the coastal districts of the state with frequent occurrence of cyclones. During 2013-14, most of the coconut gardens were severely damaged by Phylone cyclone. Majority of the farmers look forward to CDB for getting assistance under ongoing schemes particularly LODP scheme. Since the collectives were formed and integrated to CPF, CDB has approved a special package to the farmers in Srikakulam during the financial years 2013-14 to 2014-15. The majority of the farmers in the CPC have been covered and so far assistance to the tune of Rs 3.72 crores has been utilized for distribution of inputs under LODP thereby benefitting 3678 farmers.

Farmers are interested in cultivating tall varieties in Srikakulam district. The size of nut is bigger when compared to other coconut growing areas of the state. Coconut Development Board has already selected mother palm gardens in the jurisdiction of their CPC, because of the good quality seed nuts. Company is promoting the cultivation of dwarf varieties and took the initiative to supply 37,500 seedlings including 5000 dwarf varieties to the farmers of Srikakulam from DSP farm, Vegiwada and Kondagaon by linking with AEP through the area expansion programme during this financial year. In order to solve the shortage of quality seedlings, Company has already initiated a survey for preparing a data bank



Farmers Meeting - Silagam

of mother palms in addition to the existing gardens selected by CDB. The selected nuts will be utilized for establishing three coconut nurseries which will help the farmers for getting good quality seedlings.

The company further plans to take up the production and marketing of neera and its value added products after the amendment of new excise rule in the state of Andhra Pradesh. Company will ensure an active work force by conducting FoCT trainings to CPS sponsored trainees.

Better functioning and monitoring of company has been carried out by distributing works on de-centralized basis to each CPF presidents. Company is getting technical assistance and guidance from experts like chartered accountants, Agricultural Scientists etc. The company already received queries for exporting coir based products to China and France. Since Srikakulam nuts are superior in weight, the CPC will explore the possibility of exporting raw coconut to Arab countries. Company is making necessary arrangements to collaborate with financial institutions like NABARD and already conducted meetings with the officials. Company is encouraging the farmers in production and export of organic coconut and its value added products, which have high

prospects in international market. Establishment of an integrated processing unit is the ultimate aim of the company for which a project will be submitted to CDB for availing assistance under TMOc. The CPC has already initiated discussions with Coir Board for assistance for units for extracting fibre. Company also plans to introduce bore-wells with solar pump sets and solar energy units in coconut farming by converging with the NHM and state level agencies.

Company Bank is the forthcoming initiative of the CPC for the development and welfare of the member farmers. Through Company Bank, a farmer with one hectare area will be eligible for getting an agricultural loan of Rs. ten thousand to Rs. one lakh with 4 % annual interest. Company Bank will also provide financial assistance to the children of farmers for their higher education with the help and guidance of NABARD.

Company believes that the establishment of networked coconut industrial cluster involving participation of competitive forums and working groups with the support and association of Government departments with backward and forward linkage will help the farmers reap maximum returns from coconut farming. ■

Let's Unite

& Confront the Falling Prices

● V.C. Vasanthakumar,
Assistant Director, Foreign Trade, CDB Kochi-11

- Lobbying behind the price fall
- Present price fall temporary
- CPCs to intensify procurement

Coconut growers across the country are going through a very difficult situation due to the unexpected decline in crop prices. At a time when the production is low and the major harvesting season in Kerala has come to an end and with the arrival of the South Western monsoon, the price of crop and its value-added products should naturally rule high. Hence, it is very clear that the price fall is not natural and is evident that a powerful lobby that is not buying the crop at this time of the harvest season is behind this phenomenon. At this time, the small and marginal coconut growers try to sell off their produce at a very low price to the mill owners or middlemen.

Rumors have been taking rounds that it is because of the increase in productivity that the prices of coconut and its value-added products are facing a downward trend. However, reality is different. It is expected that there would be around 11.81 per cent decrease in production in the southern states of Kerala, Tamil Nadu, Karnataka and Andhra Pradesh which together accounts for about 90 per cent of the total production of coconut. According to a concurrent study conducted by Coconut Development Board to forecast coconut production, which

has been on full swing from 2012-13 onwards, it has been reported that the total production is expected to be 10 per cent low. The reports point out that from 2012-13 onwards, the production is decreasing year over year.

It has become a routine for the farmers to be silent when the prices are going up and wait at a time once the prices go down. Farmers usually try to sell their produces at the most possible rates when the price is going down, which needs to be changed at the earliest. Coconut farmers should be able to control and defend the price falls. Only then the produces will be able to stand on their own, thereby escaping the

external forces. It is only because the farmers have forgotten or failed to do their duties that private players and those with vested interests are interfering and doing damage to the farmers at large. It is the duty of each farmer to fight against this and try get a steady price for their produces. It may not be possible for a single farmer to come against such international players and private players. But, the timely intervention of farmer collectives such as Farmer Producer's Organizations (FPOs) and Coconut Producer Companies can play a vital role here.

The companies should look forward to enhance the productivity of the crops and also take appropriate



measures to educate the farmers for taking up better plantation methods and give proper care for the crops. The average productivity of the federations registered under Coconut Development Board is between 30 and 60. The aim is to raise it to 100.

The most important thing as far as planting new seedlings are concerned, is selecting best quality seedlings. The Producer companies should also create awareness among the farmers regarding the need to plant more dwarf variety seedlings. The dwarf varieties commence bearing earlier than the taller varieties and are also ideal for the production of Neera. Collective procurement is one way which will help the small and marginal farmers from heavy losses. At a time when it is needed to be kept for long, farmers should pay attention to primary processing also. Another thing which has to be kept in mind is that the price of value-added products is not in accordance with the price of the produce. When coconut is processed into value-added products such as coconut oil and copra, the value of the produce is increasing. Even if the price of coconut and copra affects the farmers adversely, the farmer decides the price of branded coconut



oil, which is an added advantage. There is an urgent need to install more copra dryers with the capacity to process at least 10,000 nuts in a batch. This will help the farmers at times of price fall. Each company should also establish a coconut oil processing plant, which will help the farmers get good revenue.

The next step towards achieving a better crop value is concentrating on virgin coconut oil, which has good export value in America, Japan, Britain etc. The value added product, which had only Rs. five crore worth export in 2013-14, has seen Rs. 24 crore worth export in 2014-15. Every month, quintals of virgin coconut oil are being exported to foreign countries from the Cochin Port, Kerala. The export value of virgin coconut oil saw a 500 per cent increase in the current fiscal as compared to the first quarter of 2014-15. In 2015-16, it is expected that the figures will go upto Rs. 60 crore. The companies should work towards setting up enough virgin coconut oil processing units in the country before the international players get into the market realizing the potential of this product. The producer companies should keep in mind that they can get financial assistance from Coconut Development Board for setting up plants on a large scale.

The companies should also target on bringing out Neera and its

value-added products, which is also gaining momentum in the domestic as well as international markets. There is also enough opportunity in starting processing units for developing value-added products. Opportunities are raining in the Gulf countries as NRIs are showing more interest in home-grown items, especially coconut and its value-added products. Keeping the interest of NRIs in mind, the companies can focus more on bringing out such products so that it will help you find stability to the produce. The producer companies are focusing on the domestic market only, which is also keeping them away from growing further. The companies should aim at the international markets and work accordingly. A proper marketing strategy needs to be planned and implemented for achieving the same. In many of the super markets in India, we can see coconut and its value-added products from countries like Thailand. It is time to think about the wider possibilities and act accordingly. The producer companies has to be more vigilant and open to new ideas and thereby try to find a place for their produces in the domestic, national and international markets. It is only then the farmers would be able to handle the pressure of unexpected price falls and fight against the interferences of lobbying of the private players. ■

It has become a routine for the farmers to be silent when the prices are going up and wail at a time once the prices go down. Farmers usually try to sell their produces at the most possible rates when the price is going down, which needs to be changed at the earliest.



Neera

A Tasty & Healthy Boon to Coconut Farmers

● Mini Mathew, Publicity Officer & Arya Aravind, Journalist, CDB Kochi-11

Ten years ago on July 28, 2005, A. P. J. Abdul Kalam — who was then the president — presented a vision document for Kerala's development in the state assembly by giving thrust to coconut value-added products and Neera, tourism, waterways, Ayurveda, deep sea fishing, major special economic zones, IT sector among others to channel development. The state has excelled in tourism and average performance in the case of IT, fishing and other sectors. But, Chief Minister Shri. Oommen Chandy pointed out that the state had progressed in the right direction with Neera, which is just a perfect example. It had changed the life of coconut farmers and created many job opportunities.

The ever increasing number of neera parlors and the skyrocketing sales of the health drink, speaks volumes about the importance Neera is gaining in the hearts of people. There is visibly no other product that has come this long as far as health benefits and taste is concerned. Undoubtedly we can say that Neera is revolutionizing the drinking habit of people across the world.

Market Watch

The Coconut Producer's Companies which are engaged in the production and marketing of Neera should focus more on bringing out quality products according to the market demand. The value of the product can



be understood from the words of Shri. Oommen Chandy, the Hon'ble Chief Minister of Kerala, who has termed Neera project as his dream project. The aim of the companies and the farmer collectives should be to bring this product into the domestic and international markets and maintain a steady growth. Mr. K. M. Chandrasekhar, Vice Chairman, Planning Board, Kerala, has said that if one percent of the total 18 crores of coconut trees in Kerala is used for tapping Neera, the state

would get around Rs. 5400 crore worth extra income. Of the Rs. 5400 crore, farmers would be getting around Rs. 2700 crore, Neera technicians would get Rs. 1350 crore and the government tax would be around Rs. 405 crore. But, reality is a bit more different here. The actual statistics points out that the income the farmers, companies and the technicians are getting is way too high than the projected ones. Apart from this, the Government of Kerala has recently issued an order giving instructions to the local self government institutes to support Farmer Producer Organizations (FPOs) for marketing Neera and its value-added products through Panchayaths, Municipal Corporations, Municipalities etc.

By participating in the domestic, national and international exhibitions, Board is spreading great awareness among people about the goodness of Neera and its value-added products and also giving opportunity



for the producer companies to introduce their products to the probable clients by participating in exhibitions. In almost all the exhibitions, Board is getting ample footfall for tasting Neera. Other value added products such as Neera Honey, Jaggery, Neera Sugar, Neera Chocolate, etc also getting good number of trade enquiries from around the world. Neera Sugar is a natural product with no chemical process involved in its production and is emerging as an attraction in European markets. There is growing demand in the developed countries for coconut sugar as an alternative to refined cane sugar.

The companies have to keep this factor in mind and work towards making this product an internationally acceptable one. The companies has to give more importance to trade mark, packaging, labeling, marketing, quality and availability of the products before venturing into the market. A product which has all these elements in it will sure be able to conquer the minds of people and would be able to find its own place in the market. International buyers from America, Canada, France, Germany and Middle East are all set with their markets open to welcome the product. All we have to do is rise up to the expectations and make hay while the sun shines.

Healthy All the Way!

We have been witnessing a drastic change in the lifestyle of people across the world. People were

largely interested in soft drinks and health drinks available in the market, which are extremely harmful for health. Reports have been coming out that per year around 184000 people are losing their lives because of the so-called synthetic soft drinks. Realizing this, many people are now coming towards a more natural and healthy option. The ready-to-drink Neera is one of the most natural and nutrient-rich health drinks available in the market. Drinking Neera is good for keeping the body hydrated and its powerful antioxidants will help you feel refreshed and full of energy. It also regulates body's fluid balance, control temperature and digest food. Keeping in mind these factors, the Board has promoted the ever natural and healthy Neera as a viable option.

Neera can be concentrated to different brix (value of total solids) level at different temperatures to produce primary products like Neera sugar, Neera jaggery, Neera semi solid jaggery, jaggery syrup, Neera honey and Neera concentrate. Another advantage is that working moms and cookaholics get a great choice for substituting normal cane sugar, with natural and healthy Neera sugar/jaggery/syrup/honey in almost all the dishes and make wonderful, energizing and healthy foods for your loved ones. Neera sugar is an unrefined sugar and is known to be rich in vitamins and minerals. Consumption of Neera sugar helps reduce & maintain weight, control &



manage diabetes and is naturally rich in a number of key vitamins (A, B & C), minerals and phytonutrients, including potassium, phosphorous, zinc, iron and vitamins B1, B2, B3 and B6. Neera drink can be given to school children as a nutritious health drink. Neera chocolates would also be a hit among school children.

Opportunities Galore

The job opportunity this creates is also a commendable one. There is an urgent requirement of 25000 Neera tappers in Kerala. Extracting Neera requires a technically skilled person to perform activities such as climbing tree, skillfully stimulating the inflorescence, application

of disinfectant, wrapping the inflorescence etc in a hygienic manner. So to venture into the production of Neera and its value added products there is an immediate need to create a task force of 'Neera technicians'. Coconut Development Board has taken the initiative of developing a pool of skilled Neera technicians. This training is of a period of 56 days. It is open for anyone from any profession or unemployed youth belonging to the age group of 18-45 years. Average monthly income of a neera technician is approx Rs. 20000/-. Till now Board has imparted training to 1559 neera technicians through CPCs. Government of Kerala has allocated Rs. 12 crores for neera technicians training and would incur Rs. 10000 per person for the training.

There are Neera technicians in Kaipuzha Coconut Producer Company Ltd., who have drawn nearly half a lakh as their monthly remuneration. The situation is same in other producer companies also. KCPCL had given training to people from Tamil Nadu, Chhattisgarh, Assam, Jharkhand and Lakshadweep for these green collar jobs and utilizing their services for the company. If one per cent of Neera is tapped in Kerala, it would create around one lakh job opportunities. The traditional toddy tappers get ample number of opportunities in this field. Around 345 toddy tappers, who have been given 15 days of training by Coconut Development Board; have been appointed as Master Technicians so far. The Neera project not only gives opportunity to the technicians or the climbers but also creates lot of scope in value-addition too. Neera can be used in bakery products, sweets, confectionaries etc. There are ample opportunities in the food processing sector also. CDB is imparting training for those who are interested in this field. The producer companies, which are already formed and those who are on the pipeline also needs highly qualified management



Trained Neera technicians of Karappuram CPC, Alappuzha

professionals and different levels of qualified personnel for smooth functioning of the company.

Scarcity of trained Neera technicians is posing a tough challenge to the sector. The need of the hour is finding skilled neera technicians and the timely intervention of the coconut producer's companies to enhance the production of Neera as per the market demand. The Palakkad Coconut Producer's Company Ltd (PCPCL), which is the conglomeration of coconut producer's federations (CPFs) in Palakkad, the southern district of Kerala, and Kaipuzha Coconut Producer's Company Ltd (KCPCL), the conglomeration of CPFs in Kollam, the southern district of Kerala, are marching ahead with the Neera project. PCPCL is due to sign an agreement with Mumbai-based Foursome Partners in the second week of August 2015. The Palakkad Company operates about 28 neera parlours through coconut points across the state and sells unprocessed, fresh Neera through vending machines whereas KCPCL markets bottled Neera through kiosks in the main cities.

The Pan-India Status

Recently, in July 2015, Karnataka legislators were served with Neera and its value-added products like sugar and jaggery during the second phase of the legislature session in Bengaluru, Karnataka. The two-fold objective

of the same was to draw attention to the economic importance of this health drink and to persuade them to amend the Karnataka Excise Act to permit all coconut farmers in the state to tap Neera. The State government permits to tap Neera only in Dakshina Kannada and Udupi districts. But, if Neera is to be tapped in all districts, the Excise Act would have to be amended. In his 2015-16 budget speech, Chief Minister Siddaramaiah announced that the Act would be amended to permit members of the coconut growers' federations to harvest Neera in limited quantities from coconut trees. Though it would help in increasing the income of coconut growers, the amendment is yet to come through. Senior most officers from Horticulture and Excise Department, Govt. of Karnataka, visited CDB Headquarters recently to study issues related to production, processing and marketing of Neera.

People from the coastal belt of the country have been using Neera and its by-products for a long time. In West Bengal and Orissa most of the Neera is converted into palmgur (jaggery). In Gujarat and Maharashtra too coconut farmers produce palmgur. In Tamil Nadu, the coconut growers have been producing palmgur, palm sugar and palm candy besides selling Neera as Padhaneer whereas in Andhra Pradesh, a section of the population have been selling Neera. ■

13.5 % rise in export of Indian coconut products

● **K.S. Sebastian**, Assistant Director (Export Promotion), CDB, Kochi-11

Export of coconut products during the first quarter of 2015-16 was worth Rs.376 crores. Compared to the export during the first quarter of 2013-14, the increase was 13.6 %. Significant increase was recorded in the export of virgin coconut oil, activated carbon, dry coconut and coconut oil. Details of export of coconut products from India during the first quarter of 2015-16 are given in table 1.

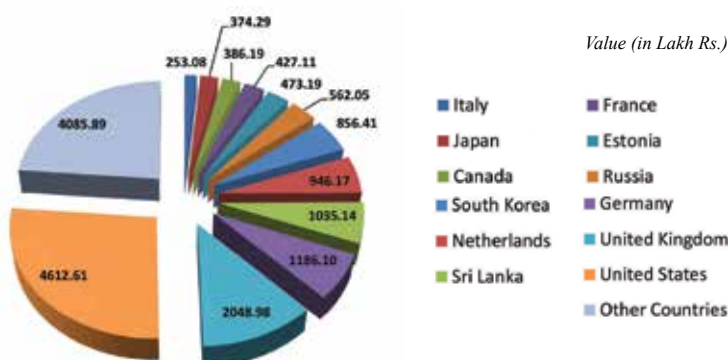
Month-wise export of coconut products 2015-16									
Sl.No.	Items	April		May		June		Total	
		Qty (in MT)	Value (in million Rs.)	Qty (in MT)	Value (in million Rs.)	Qty (in MT)	Value (in million Rs.)	Qty (in MT)	Value (in million Rs.)
1	Activated Carbon	5352.876	545.60	5294.542	554.85	5943.309	624.27	16590.727	1724.72
2	Coconut Fatty Soap		25.37		23.65	0.000	20.76		69.78
3	Hair Cream		2.79		9.19	0.000	12.39		24.37
4	Coconut Oil	593.011	124.92	814.067	170.90	762.016	165.48	2169.094	461.30
5	Coconut Water	0.000	4.65		4.59	0.000	9.45		18.69
6	Copra	151.457	15.19	190.240	19.25	275.400	25.08	617.097	59.53
7	DC	318.259	47.70	236.745	34.56	276.647	42.02	831.651	124.28
8	Dry coconut	1993.126	226.65	989.199	109.11	2085.045	201.73	5067.370	537.50
9	Fresh coconut	2443.206	90.95	3679.795	130.52	2523.819	96.13	8646.820	317.60
10	Grated/sliced coconut	140.484	30.24	121.764	33.52	182.059	30.61	444.308	94.38
11	Oval coconut shell	123.199	7.13	82.019	5.82	128.335	9.34	333.553	22.29
12	Shell charcoal	639.600	20.73	421.923	14.10	691.566	23.62	1753.089	58.44
13	VCO	143.792	45.80	137.012	44.28	83.805	26.64	364.609	116.72
14	Misc coconut products		45.74		32.35	0.000	53.93		132.02
	Total		1233.49		1186.68	0.000	1341.45		3761.62

Activated Carbon

table 2

The export of activated carbon from India during the first quarter of 2014-15 was 16591 metric tonnes. United States was the major importer of Indian activated carbon, followed by Britain. Details of countries imported activated carbon from India is given in table 2

Export of activated carbon from India (March 2015 to June 2015)



Country	Qty(in MT)	Value(in lakh Rs.)
Italy	276.100	253.08
Japan	407.300	374.29
Canada	368.002	386.19
France	301.600	427.11
Estonia	468.000	473.19
Russia	519.000	562.05
South Korea	703.900	856.41
Netherlands	1006.100	946.17
Sri Lanka	1079.900	1035.14
Germany	1039.104	1186.10
United Kingdom	1933.688	2048.98
United States	4466.571	4612.61
Other Countries	4021.462	4085.89
Total	16590.727	17247.21

Dry Coconut

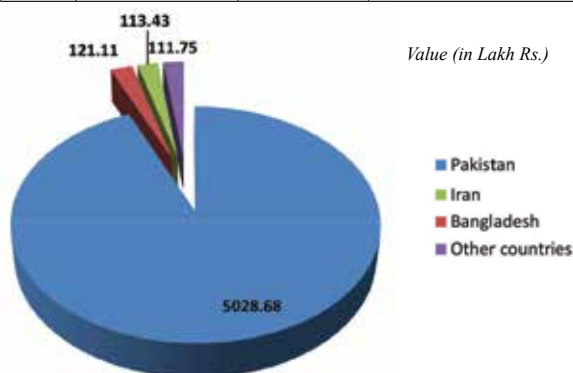


During the first quarter, 5067 metric tonnes of dry coconuts were exported from India. Of this Pakistan imported 4789 metric tonnes. Export of this product during

the first quarter in the last year was 4340 metric tonnes. Details of countries imported dry coconut from India is given in table 3.

table 3

Sl.No.	Country	Qty(in MT)	Value (in lakh Rs.)
1	Pakistan	4788.750	5028.68
2	Bangladesh	125.000	121.11
3	Iran	100.000	113.43
4	Other countries	53.620	111.75
	Total	5067.370	5374.97



Desiccated Coconut

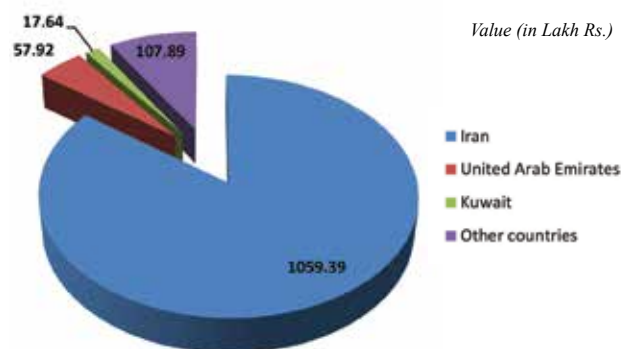
The export of desiccated coconut recorded during the period from April 2015 to June 2015 was 832 metric tonnes, compared to 756 metric tonnes during the first quarter of previous



year. Iran is the major importer of this product from India. Details of countries imported desiccated coconut from India is given in table 4.

table 4

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	Iran	702.000	1059.39
2	United Arab Emirates	38.756	57.92
3	Kuwait	11.804	17.64
4	Other countries	79.092	107.89
	Total	831.651	1242.83

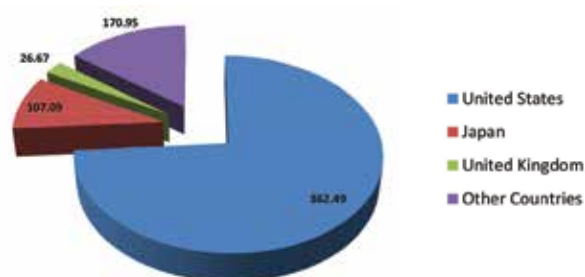


Virgin Coconut Oil

Export of virgin coconut oil from India during the first quarter was to the tune of 365 metric tonnes. United States alone imported 270 metric tonnes of VCO from India. When compared to the export of 53 metric tonnes during the corresponding period last year, the increase in quantity and value of export of VCO was over 550%. Details of import of desiccated coconut from India is given in table 5.

table 5

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	United States	270.960	862.49
2	Japan	47.269	107.09
3	United Kingdom	7.930	26.67
4	Other Countries	38.450	170.95
	Total	364.609	1167.20



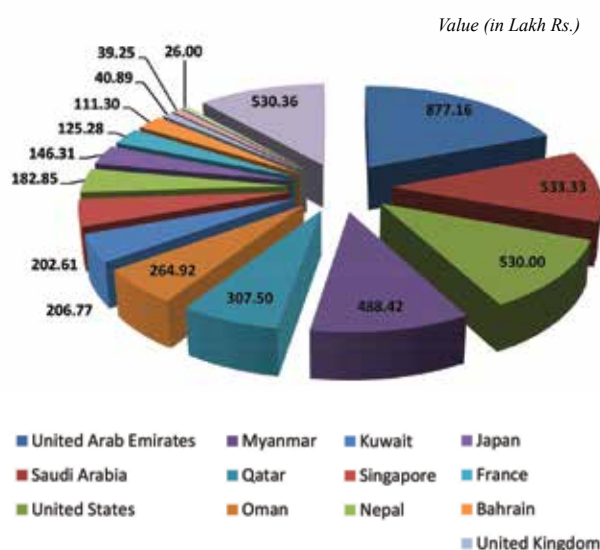
Coconut Oil

Export of coconut oil from India during the first quarter was 2169 metric tonnes, compared to 1548 metric tonnes recorded during the first quarter of 2013-14. UAE alone imported 451 metric tonnes of coconut oil. Coconut oil is also exported for edible purpose to Saudi Arabia, Qatar, Oman, Kuwait, Bahrain etc. The average FOB (Freight on Board) price for the product was Rs.212/- per kg. Details of countries imported desiccated coconut from India is given in table 6.



table 6

Sl. No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	United Arab Emirates	412.455	877.16
2	Saudi Arabia	250.780	533.33
3	United States	249.217	530.00
4	Myanmar	229.663	488.42
5	Qatar	144.591	307.50
6	Oman	124.571	264.92
7	Kuwait	97.227	206.77
8	Singapore	95.271	202.61
9	Nepal	85.979	182.85
10	Japan	68.797	146.31
11	France	58.910	125.28
12	Bahrain	52.335	111.30
13	United Kingdom	19.228	40.89
14	Germany	18.456	39.25
15	Austria	12.226	26.00
16	Other countries	249.386	530.36
	Total	2169.094	4612.95

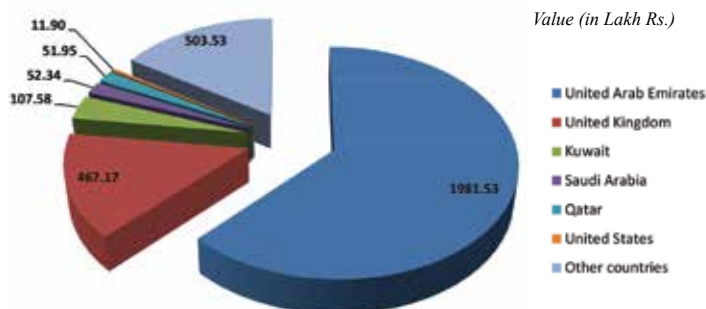


Fresh Coconut

Export of husked coconut from India during the first quarter was 8647 metric tonnes. Major portion of export was to UAE. Details of import of desiccated coconut from India is given in table 7.

table 7

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	United Arab Emirates	5394.832	1981.53
2	United Kingdom	1271.894	467.17
3	Kuwait	292.894	107.58
4	Saudi Arabia	142.496	52.34
5	Qatar	141.437	51.95
6	United States	32.392	11.90
7	Other countries	1370.875	503.53
	Total	8646.820	3175.99



Import

During the first quarter of 2014-15 (from April 15 to June 15), India imported Rs. 96 crores worth coconut products. Coconut fatty acid, copra expeller cake and coconut shell charcoal are the major items of import. Details of import of coconut products into India during the first quarter of 2015-16 are given in table 8.

table 8

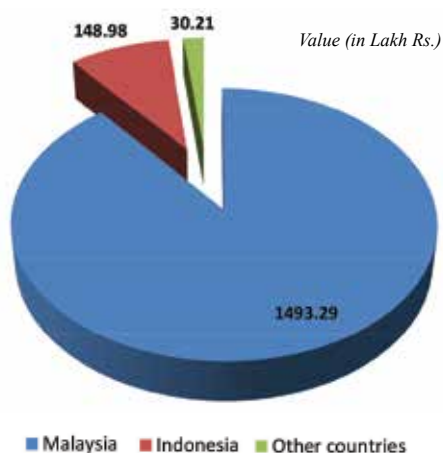
Monthly import of coconut products in to India (2015-16)									
Sl.No.	Item	April		May		June		Total	
		Qty (in MT)	Value (Rs. In million)	Qty (in MT)	Value (Rs. In million)	Qty (in MT)	Value (Rs. In million)	Qty (in MT)	Value (Rs. In million)
1	Coconut fatty acid	378.240	32.85	892.560	78.38	640.668	56.02	1911.468	167.25
2	coconut oil	551.394	63.41	405.036	28.76	244	17.83	1200.737	110.00
3	Copra oil cake	8231.055	127.13	11119.590	167.99	10255		29605.285	295.12
4	Coconut shell charcoal	1870.173	60.85	1320.689	40.73	1641.095	49.58	4831.957	151.17
5	Cream-milk-powder		9.87		10.36		7.47		27.70
6	Copra	24.423	1.75	50.000	3.89			74.423	5.64
7	Misc coconut products		4.06		10.25		23.81		38.13
	Total		299.92		340.37		320.14		960.43

Coconut Fatty Acid

Import of coconut fatty acid into India during the first quarter was 1911 metric tonnes, out of which 1731 metric tonnes was from Malaysia. Details of import of coconut fatty acid in india is given in table 9.

table 9

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	Malaysia	1730.600	1493.29
2	Indonesia	165.850	148.98
4	Other countries	15.018	30.21
	Total	1911.468	1672.47

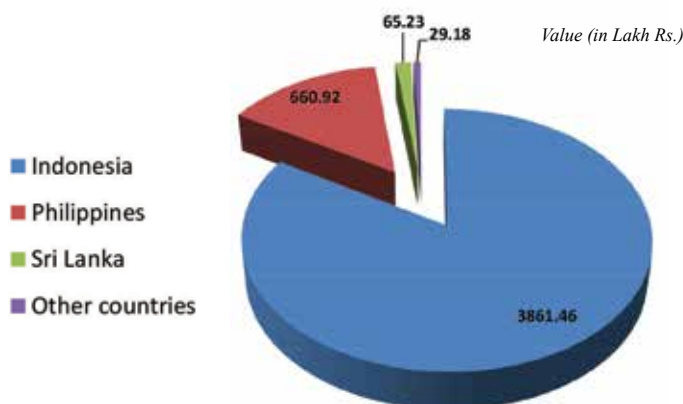


Copra expeller cake

One major item of import among coconut products is copra expeller cake. During the period from April 15 to June 15, quantity of import of this product was 29605 metric tonnes. Details of import of this is given in table 10.

table 10

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	Indonesia	24748.480	3861.46
2	Philippines	4350.000	660.92
3	Sri Lanka	275.750	65.23
4	Other countries	231.055	29.18
	Total	29605.285	4616.79

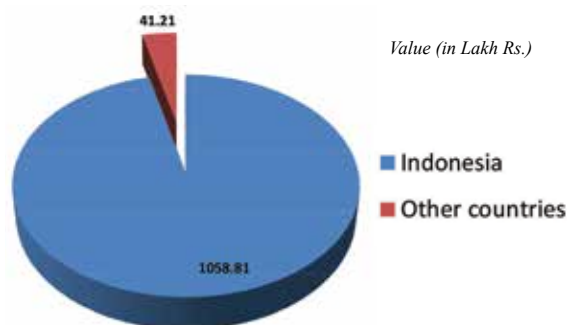


Coconut Oil

Import of coconut oil into India during the first quarter was 1200 metric tonnes. Highest import recorded was from Indonesia, which was 1138 metric tonnes. Details of countries from where India imported coconut oil are given in table 11.

table 11

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	Indonesia	1137.820	1058.81
2	Other countries	62.917	41.21
	Total	1200.737	1100.02

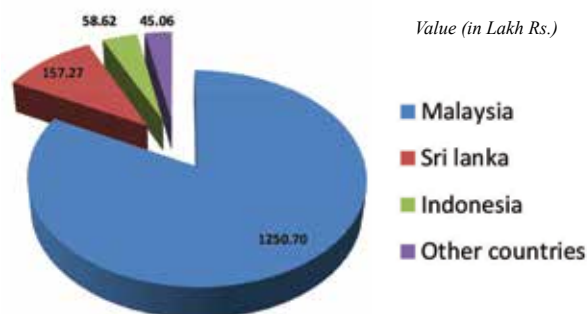


Coconut Shell Charcoal

Import of coconut shell charcoal into India during the first quarter stood at 4832 metric tonnes. The highest import was recorded from Malaysia. Details of import of coconut shell charcoal is given in table 12.

table 11

Sl.No.	Country	Qty (in MT)	Value (in lakh Rs.)
1	Malaysia	3978.788	1250.70
	Sri lanka	503.359	157.27
2	Indonesia	223.740	58.62
3	Other countries	126.070	45.06
	Total	4831.957	1511.65



Coconut shell based activated carbon and coconut shell charcoal exports eligible to get retrospective export incentive

With Coconut Development Board's intensive and regular follow ups, Directorate General of Foreign Trade approved to extend export incentive to coconut shell based activated carbon and coconut shell charcoal exports with retrospective effect from 23rd August 2010. The order is expected to benefit the activated carbon and coconut shell charcoal exports made between 23rd August 2010 and 24th February 2014. Among all coconut



products, activated carbon is the highest foreign exchange earner. During the year 2014-15, activated carbon worth Rs.55780.19 lakhs was exported from India. Coconut shell charcoal is also exported from India, though the quantity and value is low in comparison to coconut shell based activated carbon.



Saturated fat does not cause heart disease

For many years the prevailing thought among the majority of health care professionals was that saturated fats cause heart disease. We have been fed this line now for the past five decades. We've heard it so many times that we just assume that there is a mountain of evidence to back it up. However, the evidence has been sorely lacking. In fact, many studies have refuted this theory, but since these studies go contrary to the popular medical belief, they are generally ignored and forgotten. Only those studies that seem to support the saturated fat-heart disease hypothesis are given any recognition or publicity. However, a growing body of research challenging the saturated fat-heart disease connection is starting to convince many doctors to reconsider how they look at fats and heart disease.

A new study published in the journal *Annals of Internal Medicine* showed beyond a reasonable doubt that saturated fats do not cause heart attacks and other cardiac events. The researchers discovered that saturated fats do not cause heart disease while so-called "healthy" polyunsaturated fats do not prevent cardiovascular problems. In contrast with decades

● Dr. Bruce Fife

Saturated fat has proven to be relatively benign while sugar poses a greater risk for heart disease

old nutritional advice, researchers at Cambridge University have found that giving up fatty meat, cream, or butter is unlikely to improve health. They are calling for guidelines to be changed to reflect a growing body of evidence suggesting there is no overall association between saturated fat consumption and heart disease.

"My take on this would be that it's not saturated fat that we should worry about" in our diets, said Dr. Rajiv Chowdhury, the lead author of the new study and a cardiovascular epidemiologist in the department of public health and primary care at Cambridge University.

In the new research, Dr. Chowdhury and his colleagues sought

to evaluate the best evidence to date. They conducted a "meta-analysis" of data from 72 studies involving more than 600,000 participants from 18 countries. The scientists also reviewed evidence from 27 randomized controlled trials – the gold standard in scientific research – that assessed whether taking polyunsaturated fat supplements like fish oil promoted heart health. The key finding was that total saturated fat, whether measured in the diet or the bloodstream, showed no association with heart disease. In addition, levels of so-called healthy polyunsaturated fats such as omega-3 and omega-6 had no general effect on heart disease risk. There was no less disease in those eating higher amounts unsaturated fat, including monounsaturated fat like olive oil or polyunsaturated fat like corn oil. Only omega-3 fatty acids found in fish was linked to a lower risk of heart disease. However, popular omega-3 and omega-6 supplements appeared to have no benefit.

The researchers did find a link between trans fats, produced when vegetables oils are hydrogenated. Partially hydrogenated vegetable oils

are commonly found in processed foods. But they found no evidence of dangers from saturated fat, or benefits from other kinds of fats.

The primary reason saturated fat has historically had a bad reputation is that it increases low-density lipoprotein cholesterol, or LDL, the kind that has been assumed to raise the risk for heart attacks. But the relationship between saturated fat and LDL is complex, said Dr. Chowdhury. In addition to raising LDL cholesterol, saturated fat also increases high-density lipoprotein, or HDL, the so-called good cholesterol that has shown to protect against heart disease. The LDL that it raises is a subtype of big, fluffy particles that are generally benign.

The smallest and densest form of LDL is more dangerous. These particles are easily oxidized and are more likely to set off inflammation and contribute to the buildup of artery-narrowing plaque. An LDL profile that consists mostly of these particles usually coincides with high triglycerides and low levels of HDL, both risk factors for heart attacks and stroke.

The smaller, more artery-clogging particles are increased not by saturated fat, but by sugar, sugary foods and an excess of carbohydrates. "It's the high carbohydrate or sugary diet that should be the focus of dietary guidelines," he said. "If anything is driving your low-density lipoproteins in a more adverse way, it's carbohydrates."

While the new research showed no relationship overall between saturated or polyunsaturated fat intake and cardiac events, there are numerous unique fatty acids within these two groups and there was some indication that they are not all equal.

When the researchers looked at fatty acids in the bloodstream, for example, they found that margarine acid, a saturated fat in milk and dairy products, was associated with lower cardiovascular risk. The polyunsaturated fats found in fish,

is also protective. But a number of the omega-6 polyunsaturated fatty acids, commonly found in corn, soybean, and other vegetable oils and processed foods, may pose risks, the findings suggested.

The researchers then looked at data from the randomized trials to see if taking supplements like fish oil produced any cardiovascular benefits. It did not.

But Dr. Chowdhury said there might be a good explanation for this discrepancy. The supplement trials mostly involved people who had pre-existing heart disease or were at high risk of developing it, while the other studies involved generally healthy populations.

So it is possible that the benefits of omega-3 fatty acids lie in preventing heart disease, rather than treating or reversing it. Despite the clear evidence presented in this and many other studies, it will take a long time before doctors change their way of thinking. Most are so entrenched with the belief that saturated fats are harmful that they will continue to stick with the old beliefs.

Dr. Frank Hu, a professor at the Harvard School of Public Health, who was not involved in the study, said the findings should not be taken as "a green light" to eat more steak, butter, and other foods rich in saturated fat. In other words, we should not abandon old ways simply because new science proves otherwise. In like manner, Bruce Griffin, professor of nutritional metabolism at the University of Surrey, who also was not involved in the study, cautions against taking this study to literally, "To suggest that the theory relating saturated fat to increased total cholesterol is flawed, is nonsense, and contradicts 50 years of evidence based medicine." What he is inferring is that we should ignore new evidence because it contradicts a generally accepted and loved theory. Note that the saturated fat-heart disease connection is just a theory. After 50 years of research

no one has yet to prove it, but many studies have disproven it, including the current study.

Alice H. Lichtenstein, a nutritional biochemist at Tufts University, agreed that "it would be unfortunate if these results were interpreted to suggest that people can go back to eating butter and cheese with abandon." Dr. Lichtenstein, who also was not involved in the latest study, was the lead author of the American Heart Association's (AHA) dietary guidelines, which recommend that people restrict saturated fat to as little as five percent of their daily calories, or roughly two tablespoons of butter or two ounces of cheddar cheese for the typical person eating about 2,000 calories a day. The heart association states that restricting saturated fat and eating more unsaturated fat, beans and vegetables can protect against heart disease by lowering LDL cholesterol. However, according to this new study Dr. Lichtenstein and the AHA are wrong. Saturated fat increases HDL (the good) cholesterol and the large (benign) LDL. It does not increase the small (harmful) LDL, that's what sugar does. This is not the first time that the AHA policies have clashed with science. It makes one wonder whose interests the AHA represents—the people, or the pharmaceutical industry who make billions of dollars selling drugs to treat high cholesterol, telling us to avoid saturated fat but eating sugar is okay. The AHA will continue to sell its outdated theory of heart disease and caution against the use of saturated fats despite this and similar studies. Your doctor, unfortunately, will continue to be misled and confused about the issue. ■

Dr. Bruce Fife is Certified Nutritionist and Doctor of Naturopathic Medicine, and Director, Coconut Research Center, based in USA.

Source: Cocoinfo International Volume. 22, No.1, 2015

Mushroom, a best companion crop for coconut

● S.C. Sahoo , K.B. Mohapatra and H.P. Maheswarappa ,
ICAR-AICRP on Palms, OUAT, Bhubaneswar, Odisha



Mushrooms are healthy foods and promising nutraceuticals. Odisha has tremendous potential for mushroom cultivation due to availability of abundant agricultural biomass, manpower and suitable climate.

Indian agriculture is now facing the challenges of nutritional security for the ever increasing population. In future, the depleting agricultural land, climate change, water shortage and need for quality food products at competitive rates are going to be the vital issues. Hence, it is imperative to divert our agricultural activities in areas like horticulture to meet these challenges and to provide food and nutritional security to our people. Mushroom cultivation is one such component that not only uses vertical space but also helps in addressing the issues of quality food, health and environmental sustainability. Fortunately, mushroom has gained importance in recent years possibly for the global shift towards vegetarian food and recognition of mushroom as a functional food. Mushroom cultivation also offers scope to recycle agro-wastes as carbon pool into good quality protein, much of which are otherwise wasted in the field. This unique horticultural

venture has tremendous scope to meet the challenge of food shortage without undue pressure on land.

Mushroom as an intercrop in coconut garden

Coconut (*Cocos nucifera* L.) palm is an important perennial palm that survives more than 70 years. It is mostly grown under mono cropping system, as a result of which the total farm productivity is much lower than the actual potential. Further, frequent price fluctuation in coconut and high production cost lead to monocropping of coconut as not a sustainable and more economical proposition. Coconut garden provides excellent opportunities to exploit the interspace potential for maximizing returns per unit area by raising different intercrops. The most possible intercrops in coconut gardens include perennial, biennial and seasonal including medicinal and aromatic crops. Intervention of other agricultural practices including

raising of other crops become indispensable for augmenting the income of the coconut farmers through efficient utilization of available land, microclimate and labour.

Scope of mushroom cultivation in coconut garden

Coconut is being grown in an area of 54,291 hectares with an annual production of 3805 lakh nuts (2012-13). The productivity level of coconut in the state is gradually increasing and has reached to 7500 nuts/ha (2012-13). Unlike other intercrops, mushroom cultivation inside coconut garden is now gaining momentum among the farmers of Odisha. Among different types of mushrooms, straw mushroom (*Volvariella volvacea*) is the obvious choice for the farmers. Straw mushroom is well suited for cultivation in the tropics because of its requirement for comparatively higher temperature for production. In addition, the mushroom grows on non-pasteurized substrate, more desirable for low input agricultural practices. It is cultivated predominantly in outdoor as an intercrop in the shade of coconut plantations in the hot and steamy coastal situation during summer and rainy seasons. Odisha is the only state where paddy straw mushroom is grown commercially for eight

months a year. Odisha produces about 3.05 million tones of paddy straw per annum and a major part of it is left out to decompose naturally or burnt in situ. Outdoor cultivation of straw mushroom is increasingly popular owing to low capital investment particularly for availability of straw at a cheaper rate throughout the year. This system accounts for over 60% production of straw mushroom in the state. Straw mushroom has become an economic and nutritional main stay in the agricultural economy of coastal belt of the state. Mr Trinath Pradhan of Siara village of Brahmagiri, Puri Dist. is growing paddy straw mushroom in an area of 2.0 ha of coconut garden.

Cultivation of paddy straw mushroom in coconut garden

The microclimate of the coconut plantations offers a favorable place for successful cultivation of straw mushroom. The available temperature and humidity varies within 25-38°C and 70-96% respectively, which is favourable for cultivation of straw mushroom. Further the winter is mild and therefore, the crop is raised profitably from the month of February to November. Straw mushroom being a low duration crop (15 days), the farmers are able to raise 12-15 crops on a span of 10 months in the coconut system.



Good quality paddy straw bundles are collected, made to 45cm long by trimming both the ends and soaked in 2% solution of calcium carbonate for six hours. Bundles are taken out, excess water is drained off to 65% substrate moisture and beds are raised with dimension of 1.5' x 1.5' x 1.5' (length x breadth x height). Requirement of spawn and organic additive have been standardized at 3% each of the dry weight of the substrate. Three layered raised beds are prepared for spawning and organic supplementation at 1:1:2 proportions. Beds are topped with a thin layer of straw followed by covering with polythene sheet that maintains appropriate temperature for mycelia ramification (28-30°C) and fruit body formation (28-30°C). Polythene sheet is removed after emergence of pin heads, watering done as and when required and the fruits of the first flush are harvested at 14-15 days followed by providing the polythene cover once again. The second harvest from the second flush is harvested at 21-22 days. One bed thus prepared, may yield approximately one kilogram of fruits with a biological efficiency of 15% with appropriate aftercare.



Cultivation of oyster mushroom

Oyster mushroom, *Pleurotus* species can be successfully grown during winter months during November to February in the coconut garden. Oyster mushroom prefers a temperature of 20-30°C and 80-85% humidity which is available inside a coconut orchard. The oyster mushroom can be cultivated employing most cellulosic farm wastes using a variety of containers such as polythene bags, nylon nets, baskets, shelves, trays etc. The spawn run is rapid and the first crop of mushroom can be harvested in about three weeks' time. Gray oyster mushroom (*Pleurotus sajor-caju*), white oyster (*P. florida*), pink oyster mushroom (*P. eous*) and blue oyster mushroom (*Hypsizygous ulmarius*) are the ruling species of the state. Pink oyster is gaining popularity owing to its attractive colour along with its good taste and flavour for small scale semi-urban and urban units.

The straw bundles are cut into 1.5-2.0' size and soaked in clean and cold water for 12-16 hrs. depending upon the stiffness of the straw. The cut pieces are sterilized in steam for an hour and are spread to drain out excess water maintaining 65% moisture in the substrate. The spawn from the bottle is removed and divided into four parts, likewise the boiled wheat is divided into four parts. The straw pieces are filled in

the bag upto 6" thickness to make it compact. The spawn and boiled wheat (one part each) put towards the periphery only to facilitate the emergence of fruit bodies, and top of the polythene bag is then tied up. For gas exchange, 10-20 holes are made around the bag by a clean nail. The bag is incubated in darkness for 15 days for mycelia growth. After that the mycelia mat is removed from the polythene bag and hanged in the racks. From the second day onwards the bags are watered to maintain substrate humidity. 20-25 days after spawning small buds develop and 3-4 days after they attain harvestable stage. Mushrooms are harvested in 3-4 flushes at 7-10 days interval. Total yield obtained from a single bag is 1.5kg-2kg. Bio-efficiency is more than 100%. The biological efficiency of oyster mushroom is very high (100 %) and the shelf life is better (24 h) than straw mushroom. Production cost is low with little longer cropping cycle (45 days). Further, it is suitable for post-harvest processing, however the consumer demand is limited in the state.

Economics of mushroom cultivation in coconut garden

Mushroom cultivation is a profitable enterprise, and the cost involvement in raising one bed of paddy straw mushroom of 1.5' x 1.5' x 1.5' size is around Rs.50/- and if the minimum yield of mushroom

is 800g per bed, the net profit per bed will be Rs.14/- (if it is sold at minimum price Rs.80/- per kg). In a monocropping coconut garden of one hectare area where 50% land area is available for intercropping, about 5000 straw mushroom beds can be raised easily. This will give a net profit of Rs. 70,000/- in a crop cycle of maximum one month. If minimum six crops are raised during March to October, then the net profit will be Rs. 3,50,000/-. Likewise, by raising at least two crops of oyster mushroom during November to February a net profit of Rs.1,20,000/- can be obtained from 12000 oyster mushroom bags if minimum yield per bag is 1000g and sale price of Rs.40/- per kg with the expenditure of Rs.30/- per bag.

Mr. Trinath Pradhan, a farmer of Siara Village, who is growing paddy straw mushroom in 2.0 ha coconut garden could earn additional net income of Rs. 4.5 lakhs annually from five thousand straw mushroom beds by raising mushroom thrice a year. The AICRP on Mushroom & Palms functioning at Bhubaneswar support the farmers by providing technical know-how for growing mushroom in coconut garden.

Mushrooms are healthy foods and promising nutraceuticals. Odisha has tremendous potential for mushroom cultivation due to availability of abundant agricultural biomass, manpower and suitable climate. Mushroom production can be further increased by exploring scope of cultivation in the coconut gardens in coastal districts of the state. There is also increasing demand for quality products both in domestic and export markets. Further it is important to commercially utilize the spent mushroom substrate left after cultivation for making manures or vermicompost for getting additional income and proper recycling of agro-waste at the production site. ■





Natural Being for Health and Sustainability- Chiwadi Products

Chiwadi's Ancient wisdom through innovations is awarded gold medal in World Invention Innovation Contest 2015. Chiwadi's goal is to create health products whilst supporting the struggling local community and natural ecosystem.

Chiwadi Products Co. Ltd. is a Thai company founded by Sarapee Yuadyong in 2011. The company prides itself on its dedication to developing world-class coconut innovations that will add to the developments in the global coconut community. The company's strength is best exemplified by the development of company's first product, Chiwadi Organic Coconut Flower Syrup, which was introduced to the market in 2012 after the successful trial of clinical studies on the glycemic index. Chiwadi's leadership in further developments in the global coconut community was affirmed later in the year, as the organic coconut flower syrup

received awards, accolades and recognitions from various national bodies and publications across Thailand.

Other innovations that demonstrate Chiwadi's ability to innovate include the development and successful launch of Chiwadi Organic Coconut Flower Vinegar product line and the introduction of Fruiti, a ready to drink fruit juice made from organic coconut flower syrup. In early 2014, the Chiwadi Organic Coconut Syrup Vinegar and the Chiwadi Coconut Flower Honey Vinegar were introduced in the market and was very well received by consumers. Immediately following the launch of the these products in

2014, Chiwadi ended the year on a high note by winning the first prize award in the National Food Design Contest for the Tam.ma.naN Coconut Sugar Sandy Fold. In 2015, the product was introduced to the market. Subsequently, on 6th June, 2015, two of Chiwadi's products, the Organic Coconut Syrup Vinegar, also known as Coco de Nectegar and the Coconut Sugar Sandy Gold were selected for submissions for the first Global Invention Innovation Contest and both the products were awarded gold medal. The first World Invention Innovation Contest (WiC 2015) was organized by Korea Invention News (KINEWS), Asia Invention Association (AIA), supervised by Korea Invention News (KINEWS), Korea Invention Academy (KIA) and sponsored by around 15 reputed organizations.

The Gold Medal Award

Luxury drinks are often associated with sentiments of consuming alcohol, in social settings as a beverage for celebratory entertainment. Albeit this, Chiwadi Coco De Nectegar is a non-alcoholic wine, the product category is small with little competition, and at the same time, there has been consistent demand in the market for healthy and affordable premium beverages. The inspiration behind the development of the product is to help produce a premium product targeting a consumer group that is health conscious ranging from young women to young consumers, meanwhile offering an alternative to those consumers seeking healthy premium drinks with a dual-purpose that is satisfying to the palate and fulfilling for social entertainment purposes. Besides the product feature, it contributes to body wellness with low Glycemic Index sugar from coconut nectar, which helps detoxifying the body and consists of essential electrolytes suitable for all ages. The product stands alone as a unique drink that is not only healthy. But further promotes the sharing of celebrating moods not only for friends but also for family bonding. Another motive behind the development of the product was to help create jobs, in addition to providing for a consistent source of income for villagers in the local coconut community, to create a sustainable ecosystem and to protect local organic coconut farms. The increase in harvesting activity not only reinvigorates, but further



prolongs the diminishing coconut sugar tapping culture in Thailand, and transforms the ancient way of harvesting coconut sugar into an entirely new business that is targeted to promote a healthy lifestyle for consumers and sustainability of the farms. Over time, much of the fertile land in the MaeKlong region has been invaded by tourism-related businesses, constantly eroding and diminishing the number of organic terroir. It is evident that Chiwadi's projects will slow the construction boom that caters towards tourism and further promote ecology tourism in the region.

Characteristic and creative features of the invention

An oriental noble blend of coconut nectar and its vinegar renders a contemporary and elegant character. The Nectegar embodies a mature and medium body taste with charming coconut aroma that is derived from fine aging and crafts of various fermentation stages. This after wine innovation derives in subtle sweetness with vinegarish background and coconut irresistible charisma. The product is hand crafted by the minds and souls of the Chiwadi team, with aspirations to promote a healthier living society. The technical innovations behind the product were achieved by playing with the organic challenge of converting coconut nectar into wine then vinegar. The vinegar is then mixed with organic coconut nectar to blend the tastes without any preservative or heat treatment. It is a master hurdle to blend certain levels of mixed organic acid derived from the vinegar. Subsequently, ultra-filtration is applied to filter active bacteria cells out and ensure that the residual product is in its best condition. The sugar to acid ratio has to be maintained at a certain level, to procure consistent taste and product stability. It is a rare USDA certified organic product derived from coconut nectar as the one and only single raw material input.



From a social responsibility perspective, this amazing product contributes to the protection of organic coconut farms in MaeKlong, Thailand, the last heritage site for fireflies. The environment can be better protected through the promotion of via promoting Chiwadi Coco de Nectegar. Not only do the local villagers from the farms get a portion of the revenues generated, the local villagers also retain job security for harvesting coconut nectar by hand. The product's impact on multiple facets ranging from health benefits to constructive capitalism is core to the beliefs of Chiwadi – to leave the world a better place and to create a better society and environment for future generations.

Contribution and Marketing

This is a low Glycemic Index (GI) drink suitable for diabetic and health conscious people as it delays hunger and slows energy generators contributing to body wellness. The product is strategically positioned to satisfy the needs of consumers seeking affordable premium products for social entertainment and for health. The growth potential in this market segment is limitless and Chiwadi expect acceptance of the product to expand beyond the initial target consumer group and encompass larger markets with coverage across all age groups. Although the product currently targets health conscious consumers that are avid coconut lovers, consumers with illnesses have also found the product to be safe to consume. The product provides prebiotics, which help and catalyze intestinal bacteria to grow and function. The vinegar product acts as alkaline inducers converting body alkalinity, hence promoting a detoxifying process that occurs naturally. The other metabolites which are produced in the finest fermentation process are



Celebrating the award

Chiwadi receives support from Coco Life International Ltd., an organization formed in Hong Kong, which aims to support the growth of organic communities globally and brings genuinely made hand-crafted coconut related products to consumers across the world. Coco Life International Ltd. has gifted Chiwadi sweat-absorbing shirts to support Chiwadi's efforts in revitalizing the organic coconut farming culture across Thailand. The shirts were custom made and gifted to each and every single member of the Chiwadi community, ranging from coconut climbers to coconut sugar farmer to the management team. The event was coupled with the celebration of global awards received in 2015. Chiwadi believes that these awards belong to each villager that has consistently dedicated themselves to work at high calibers to satisfy the tight standards instilled by Chiwadi. Each small family is embraced as a Chiwadier, who can be proud of their achievements, as these awards and accolades would not be possible without them. Each and every member that has helped lead Chiwadi to greatness resides in the linkage throughout the value-chain of the coconut community, ranging from the local communities to the factories to the global markets, which come together collectively, to form an inter-dependent link that strives to create a better cocolife for a better tomorrow.

raw, alive and active, triggering the body to work synchronously when consumed, hence catalyzing the self-repair mechanism of the body.

Health and Medicine

The world has been evolving towards unbalancing ecology through urban and city developments. We all look for a good project that promotes for better health and sustainability of the environment. The Chiwadi Products Company Limited believes that the only way to create a sustainable environment is to let the community take care of their environment as we all are affected directly from a better or poorer environment. The

promotion of organic plantation is the only way to retard and control the negative impacts and decrease the rate of change to as low as possible. The Coconut Sugar Sandy Gold invention enables villagers to stay and thrive in their habitats at the coconut community, creating jobs for local families and inducing a greater sense of pride to the community for preserving the organic terroir and the ancient wisdom of harvesting coconuts. The activity prolongs the diminishing art of coconut sugar tapping in the country and transforms the ancient wisdom of harvesting into a new business that promotes both a healthy life style

Health is important to Chiwadi, locally grown, hand-harvested coconut nectar is one of the best alternative sweeteners around and is full of natural minerals. No fertilizers are required as the natural moats in the area provide the coconut with all of the nutrients it needs.

and sustainability. The fertile land in Maeklong, Thailand region has been invaded by the tourism industry and the project undertaken by Chiwadi will pave way for slow construction development catered towards tourism and promote ecology tourism. The innovation is mostly important as it enable consumer to get a choice for low Glycemic Index (GI) sweetener that is naturally

made from coconut for better health. People are suffering from getting too much refined sugar into the blood stream, which causes many illnesses ranging from diabetes, to high blood pressure and high cholesterol. The motive of Chiwadi's invention is to bridge the gap in the society by promoting inter-dependence among organic communities across Thailand and prolong the ancient wisdom of tapping coconut nectar and not only leverage, but also re-distribute income to these under-privileged communities. This supports eco-tourism and protects the last source of fireflies in the country.

Characteristic and creative features of the invention

Most of the sugar in the world is nowadays is presented in a free flowing format. As a result, we may have forgotten the heritage and past where the sugar was often sticky. The hygroscopic problem in sugar has disappeared globally from the aids of anti-caking. Chiwadi wanted to produce a product that was rid of

chemicals that are often prevalent in foods today. This is the origin of Chiwadi's Coconut Sugar Sandy Gold - a soft golden brown, light powder, non-hygroscopic, typically rounded sweet from Thai coconut sugar. The coconut sugar has been harvested in a pasty format for centuries, as its complex structure prevents crystal formation. The invention takes rice fiber molecules to absorb free water at a critical temperature, thus forcing phase transition referring to Ehrenfest classification. As a result, the sugar's characteristics, molecular size, energy and viscosity changes, resulting in a golden powdery format. As the drying is of gentle process, the charming coconut aroma is trapped in. The special rice fiber acts as an agglomerated agent, preventing hygroscopic problems. Therefore, it is a low Glycemic (GI) sugar with more vitamins and minerals than coconut sugar. For a food safety perspective, the water activities is lowered from drying. Therefore it is safe and has a shelf life of one year, instead of the standard one month shelf life when the sugar is in its pasty conventional form. The creation enables production at community level suitable to create a self-sufficient economy. Most of low Glycemic (GI) foods are cereal with hard fiber that need long digestion while the Coconut Sugar Sandy Gold is rounded sweet in taste, coupled with a charming aroma. Apart from the sweetness, Coconut Sugar Sandy Gold consists of human electrolytes that replenish sweats, and aids for energy loss after exercise. This is a low GI sugar suitable for diabetic and health conscious consumers, as it prolong hunger, slow energy generator contributing in body wellness. It is made from natural ingredients offering application for cereal breakfast with beans and cooking which is a big market opportunity globally. ■

Courtsey: Mrs. Sarapee Yuadyong
www.chiwadi.com

Chiwadi supports the local community through



- Using traditional methods used by Thai farmers for hundreds of years.
- Providing farmers with stable income.
- Providing farmers with financial support for upgrading their production process.
- Connecting farming communities who can teach their methods to new farmers.
- Supporting the organic and ecologically sustainable use of the natural land.
- Not using pesticides and allowing the natural environment to develop naturally.

Neera plant inaugurated



Shri. Ramesh Chennithala, Home Minister, Kerala inaugurating the neera plant set up by Karappuram Coconut Producer Company Limited

Coconut farmers should focus more on product diversification and quality of the value-added products needs to be ensured, said Shri. Ramesh Chennithala, Home Minister, Kerala while inaugurating the neera plant set up by Karappuram Coconut Producer Company Limited at Ayyappanchery, Alapuzha, Kerala on 10th July 2015. The Farmer Producer Organizations should concentrate more on bringing out quality products, which would help them get an easy entry into export markets. The Minister congratulated the efforts of Coconut Development Board and the Department of Excise for making the neera project successful. Both the State and Central governments were supporting the coconut farmers, he said. Neera need to be made popular as a good soft drink. It does have

good potential and we shall try to identify more markets for the same.

Shri.T.K. Jose, IAS Chairman, CDB, said the plant set up by Karappuram Company would be a model for all the other neera plants expected to come up in the country. Before venturing into the production of neera, Karappuram Coconut Producer Company was already producing seven different coconut based products. So far we have been considering coconut as copra and coconut oil crop. But presently, products like coconut milk are having good demand across India. Technology is available in India for producing all coconut value added products. Coconut Development Board is also extending financial assistance for setting up coconut processing units. Scarcity of dwarf variety palms suitable for neera tapping is one of the major problems faced by this sector. For bridging this gap maximum dwarf variety palms suitable for neera tapping need to be produced by Farmer Producer Organizations. He called upon the farmers to establish coconut nurseries, copra dryers and defibering units.

Dr. Thomas Issac MLA distributed the share certificates during the occasion. Shri. P. Thilothaman MLA chaired the meeting. The event felicitated the best coconut farmer, the best Neera

technician and also Fr. Joshi, Vicar, Kannankara Church, who has been supporting the activities of the company from the beginning. Dr.P.K. Mani, CEO, Karappuram Coconut Producer's Company, presented the report. Adv. A.M. Arif MLA, Adv. U. Prathibhahari, President, Alappuzha District Panchayath, Mr. Suresh Richard, District Excise Deputy Commissioner and Shri. Shajahan Kanjiravilayil, Chairman, Consortium of Coconut Producer Companies were among those present. Adv. D. Priyesh Kumar, Chairman, Karappuram Coconut Producer's Company Ltd (KCPCL) delivered the welcome address and Shri. T.S. Viswan, Director, KCPCL proposed vote of thanks

The neera plant, with a capacity of 2,500 litres per day, has been set up at a cost of Rs. 1.5 crore, of which Rs. 70 lakh has been collected from the Farmer Producer Organization. The company aims at making value-added products such as neera sugar, honey, vinegar, chocolate and syrup. The company is using the technology of Coconut Development Board for processing neera. The company also aims at coming up with value-added products such as Neera sugar, honey, vinegar, chocolate and syrup. The company is already running four Neera stalls and six more Neera parlours in and around Alappuzha is in the offing. ■



Coconut Farmers and Entrepreneurs Meet

Coconut Development Board organized a Coconut Farmers and Entrepreneurs Meet at Fisheries College, Mangaluru on 11th July 2015. Around 250 people from the Coconut Producers Societies, Federations and Companies and entrepreneurs participated in the meet. Shri. Nalin Kumar Kateel, Member of Parliament & Member, CDB inaugurated the meet. In his inaugural address, he spoke on the need for establishing a coconut park in the district. He offered all support for the development of coconut sector and the establishment of FPOs in the district.

Shri. T K Jose IAS, Chairman, CDB in his keynote address spoke on the huge potential of coconut value addition and export, which is possible through the Coconut Producer Companies. The value added products of coconut like coconut milk, cream etc, are imported by India from Indonesia, Thailand etc. Neera tapping is permitted in Kerala, Tamil Nadu and other neighbouring states, but the government of Karnataka is yet to amend the Excise Act for permitting neera production. He added that neera tapping and its value addition will give additional income to the coconut farmers. The total coconut area of three districts of Karnataka viz. Tumkur, Hassan and Chitradurga is more than the coconut area of Srilanka and Srilanka is



Shri. Nalin Kumar Kateel, Member of Parliament & Member, CDB inaugurating Coconut Farmers and Entrepreneurs Meet

exporting more value added products than India.

Shri. J R Lobo, MLA, Mangalore South, presided over the meet and appreciated the Board's activities and assured that permission for Neera tapping in Karnataka will be taken at appropriate level. Smt. Asha Thimappa Gowda, President, Dakshina Kannada Zilla Panchayath, Smt. Jacintha Vijay Alfred, worshipful Mayor, Mangaluru City Corporation and Dr. Chowdappa, Director, CPCRI, Kasaragod addressed the gathering. Shri. Hemachandra, Deputy Director, CDB, RO, Bengaluru, welcomed the gathering and Shri. Siddarameshwara Swamy, Assistant Marketing Officer, Kochi proposed a vote of thanks.

The inaugural session was followed by a technical session chaired by Dr. Chowdappa, Director, CPCRI. Dr. K.B.Hebbar, Head PB & PHT, CPCRI briefed about

value added products of coconut with special reference to Neera. The training programmes for the value added products conducted by the CPCRI were also briefed. Dr. Ravi Bhat, CPCRI briefed about the advanced coconut cultivation technology for coastal Karnataka and about the utilization of coconut waste for the improvement of soil. Shri. Hemachandra, Deputy Director, CDB, Regional Office, Bengaluru briefed about TMOC projects and the impacts of TMOC. Kum. Geethu, Food Processing Engineer, CIT, Vazhakulam briefed about Neera processing Technology developed by CDB Institute of Technology. Kum. Simi Thomas, Technical Officer, CDB, Regional Office, Bengaluru spoke on the current status of the Coconut Producer Organizations in Karnataka and the facilitation offered by CDB. Shri. K Parameswaran, Regional Business Leader, M/s Alfa Laval, Bengaluru briefed about the separator machineries for mature coconut water, coconut milk, virgin coconut oil, neera etc. Shri. Shivakumar, Assistant Manager, M/s Teakrafts Ltd, Coimbatore spoke on the machineries for desiccated coconut.

An exhibition was also organized as part of the programme wherein CDB, M/s.Keratech, Thrissur, M/s.Indous Bio Products, Puttur, M/s.Palakad Coconut Producers Company Ltd and M/s. Thejaswini Coconut Producers Company Ltd, Kannur displayed their products.



A view of Board's stall in Coconut Farmers and Entrepreneurs Meet

Monthly Operations- August



Andaman & Nicobar Islands:

Search for bud rot and rhinoceros beetle attack and adopt suitable control measures. If coconut husk is available, dig trenches of 50 cm wide and 50-60 cm deep between rows of palms and bury husk in them with concave surface up and cover with soil. Clean the basins of coconut seedlings planted in the main field.



Andhra Pradesh : Plough in situ the green manure crops raised. Search for rhinoceros beetles on the crowns of the palms and hook out the beetles by beetle hook and destroy them. As a prophylactic measure against the infestation of rhinoceros beetle, fill the youngest three leaf axils with a mixture of 250g powdered marotti/ neem cake with equal volume of sand or place naphthalene balls(12g/ palm) and covering them with sand thrice a year. Spray the palms with 1 per cent bordeaux mixture as a prophylactic measure against fungal disease. 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 water on the 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 quantity of water.

Assam : If stem bleeding disease is noticed (1) remove the affected bark tissues on the stem and apply 5 percent calixin on the wound and 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 second dose of fertilizers (4) regulate optimum field moisture by providing drainage during rain and irrigating the palms during summer. Prevent accumulation of water in the pits of transplanted seedlings. Clean the drainage channels to avoid chances of water logging.

Bihar / Madhya Pradesh : Open circular basins of 2m radius and 15-20 cm depth around the palms, if not taken during the month of July. Apply 30-50 kg farmyard manure/compost per palm in the basins already taken. If green manure crop is raised, plough it in situ or apply this to the basins around the palms. Transplanting of selected good quality seedlings can be done during this month. Plant the seedlings in such a way that the collar region is not covered with soil. Do not allow water to accumulate in the newly planted pits. Check the crown for bud rot or pest infestation and adopt measures to control them. Clean the crowns of the palms by removing all the dried and decayed matter which will come off easily when pulled by hand. Tie or prop up bunches to prevent buckling. If fertilizer application is not yet done, do it and cover the basins completely.

Karnataka : If green manure crop is raised cut them before flowering and apply it to the basins around the palms. Clean the crowns of the palms and tie or prop up bunches to prevent buckling. Search the crowns of trees

for bud rot attack. If bud rot attack is observed remove all the affected tissues and apply bordeaux paste over cut ends and cover with polythene to avoid entry of water. Check for rhinoceros beetle and red palm weevil and adopt appropriate measures. Against red palm weevil, inject one per cent carbaryl. Continue planting of seedlings in new plantations. 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 quantity of water.

Kerala/Lakshadweep: If leguminous green manure crops are grown plough in situ them. Clean the crown of palms and tie or prop up young bunches to prevent buckling. Soil application of phorate 10G @100g/palm or drenching the root zone with chlorpyrifos 20EC @ 2.5ml per liter of water during May- June and September – October controls the pest. 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 quantity of water.

Maharashtra/Goa/Gujarat: The green manure crops, weeds, etc. may be ploughed back into the soil. Tie up heavy bunches with a rope to prevent buckling. If attack of rhinoceros beetle is noticed, as a prophylactic measure fill the youngest three leaf axils with a mixture of 250g powdered marotti/ neem cake with equal volume of sand or place naphthalene balls(12g/palm) and cover them



with sand thrice a year.

Orissa : Dig up grass and weeds and turn them into the soil. Clean the crowns of the palms. Tie up tender bunches. Prepare land for sowing winter vegetables.

Tamil Nadu/Pondicherry: If green manure crop is raised plough it in situ or apply to the basins around the palms. Clean the crowns of the palms and tie or prop up bunches to prevent buckling. In irrigated gardens apply 1/4th of the recommended dose of fertilizers (third dose). 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 quantity of water.

Tripura : Clean the crowns to protect the palms from any pest/disease attack. The entire crown should then be sprayed with one per cent bordeaux mixture. If attack of rhinoceros beetle is noticed, as a prophylactic measure fill the youngest three leaf axils with a mixture of 250g powdered marotti/ neem cake with equal

volume of sand or place naphthalene balls(12g/palm) and cover them with sand thrice a year. Second dose of fertilizer should be applied during the month. After application of fertilizer if there is no rain, irrigation should be done.

West Bengal : Harvest matured nuts. Clean the crowns and remove dried leaves. Search for rhinoceros beetle and red palm weevil and take control measures. Spray one per cent bordeaux mixture or copper oxychloride preparations (0.5 per cent) on the crowns of palms against the incidence of bud rot, leaf rot and immature nut fall due to Mahali. ■

Market Review June 2015

Highlights

- The prices of milling copra and coconut oil expressed a downward trend in major markets in the country during June, 2015.
- The international price of coconut oil and copra expressed a slight improved trend during June, 2015 compared to the previous month.

The month of June 2015 witnessed a downward trend in prices of coconut, copra and coconut oil at all important markets in the country.

Coconut Oil

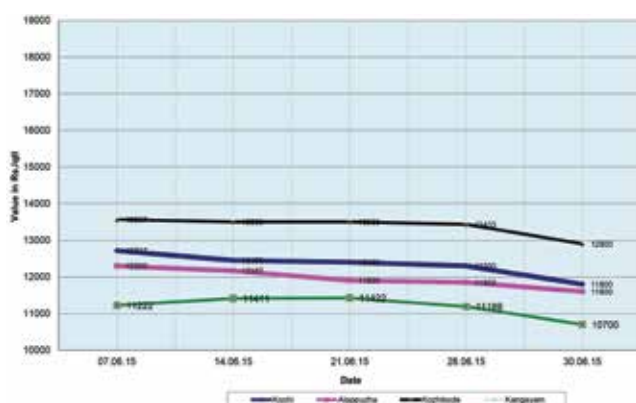
The price of coconut oil which opened at Rs.13000 per quintal at Kochi market, declined to Rs.12800/- on 2nd June, expressed a downward trend and closed at Rs.11700/- with a net loss of Rs.1300 per quintal. The price of coconut oil at Alappuzha market opened at Rs.12900 per quintal, declined to Rs.12500/- on 2nd June, expressed a downward trend and closed at Rs.11600/- with a net loss of Rs.1300 per quintal. The price of coconut oil which opened at Kozhikode market at Rs.13700/- per quintal, expressed a declined trend and closed at Rs.12800/- per quintal with a net loss of Rs.900 per quintal. The monthly average price of Rs.12415/- per quintal at Kochi market and Rs.12019/-per quintal at Alappuzha market were about ten percent lower

than that of the previous month and about 13 to16 percent less than that of corresponding month last year in the respective markets. The monthly average price of Rs.13454/- per quintal at Alappuzha market was 6 percent lower than that of the previous month and about 12 percent less than that of corresponding month last year. The monthly average price of Rs.11264/- per quintal at Kangayam market in Tamil Nadu was nine percent lower than that of the previous month and about 17 percent lower than that of the corresponding month last year.

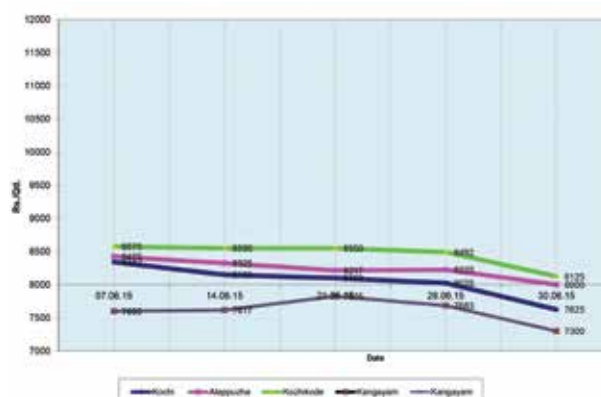
Milling Copra

The price of FAQ copra which opened at Rs.8600 per quintal at Kochi market, declined to Rs.8400/- on 2nd and thereafter expressed a downward trend and closed at Rs.7550/- with a net loss of Rs.1050 per quintal. The price of Rasi copra at Alappuzha market opened at Rs.8900 per quintal declined to Rs.8500/- on 2nd thereafter expressed a downward trend and closed at

Rs.7950/- with a net loss of Rs.950 per quintal. The price of office pass copra at Kozhikode market which opened at Rs.8650/- per quintal declined to Rs.8600/- on 2nd and thereafter expressed a downward trend and closed at Rs.7950/- with a net loss of Rs.700/- per quintal. The monthly average price of Rs.8113/- per quintal at Kochi market and Rs.8510/- per quintal at Kozhikode market were 14 and 6 percent lower than that of the previous month and about 17 and 15 percent lower than that of the corresponding month last year in the respective markets. The monthly average price of Rs.8275/- per quintal at Alappuzha market was 11 percent lower than that of the previous month and about 15 percent lower than that of the corresponding month last year. The monthly average price of milling copra of Rs.7652/- per quintal at Kangayam market in Tamil Nadu was 10 percent lower than that of the previous month and about 18 percent lower than that of the corresponding month last year. The monthly



Price behaviour of coconut oil during June 2015



Price behaviour of copra during June 2015

average price of milling copra at Ambajipeta market in Andhra Pradesh was Rs.7731/- per quintal and the prices were 12 percent lower than that of the previous month and about seven percent lower than that of the corresponding month last year.

Edible Copra

The monthly average price of Rajapur copra at Kozhikode market was Rs.13140/- per quintal, was eight percent lower than that of the previous month and nine percent lower than that of the corresponding month last year.

Ball Copra

The monthly average price of ball copra at Kozhikode market at Rs.11546/- per quintal, were nine percent lower than that of the previous month and about 13 percent lower than that of the corresponding month last year.

The monthly average price of ball copra at Tiptur APMC market in Karnataka was Rs.13171/- per quintal. This was marginally higher than that of the previous month and about three percent higher than that of the corresponding month last year. The monthly average price of ball copra at Arsikere APMC market in Karnataka was Rs.11719/- per quintal, which was about six percent lower than that of the previous month and about seven percent lower than that of the

corresponding month last year.

Dry Coconut

The monthly average price of Rs.10469/- per thousand nuts of dry coconuts at Kozhikode market was marginally lower than that of the previous month and about nine percent higher than that of the corresponding month last year.

Coconut

The monthly average price of partially dehusked coconut at Nedumangad market was Rs.11096/- per thousand nuts, which was about 31 percent lower than that of the previous month and about 23 percent lower than that of the corresponding month last year.

The monthly average price of partially dehusked coconut at Arisekere APMC market in Karnataka was Rs.12901/- per thousand nuts, which was marginally lower than that of the previous month.

The monthly average price of partially dehusked coconut at Bangalore APMC market in Karnataka was Rs.17038/- per thousand nuts, which was marginally lower than that of the previous month and 43 percent higher than that of the corresponding month last year. The monthly average price of Grade-1 quality partially dehusked coconut at Mangalore APMC market was Rs.17500/- per thousand

nuts, which was marginally lower than that of the previous month and about 45 percent higher than that of the corresponding month last year.

Tender coconut

The monthly average price of tender coconut at Madur APMC market in Karnataka at Rs.10346/- per thousand nuts, was 23 percent lower than that of the previous month and about 13 percent higher than that of the corresponding month last year.

International

The International monthly average price of coconut oil at Philippines (C.I.F. Rotterdam) market was US \$ 1110 per MT. This was three percent higher than that of previous month and 19 percent lower than that of corresponding month last year. The monthly average price of US\$740 per MT of copra was marginally lower than that of the previous month and about 17 percent lower than that of the corresponding month last year.

The domestic price of coconut oil during the month of June 2015 in Philippines was US\$1075 per MT and in Indonesia the price was US\$1085 per MT. The international price of Palm oil was US\$666 per MT, Palm kernel oil (RBD) US\$922 MT and Soybean oil US\$711 per MT respectively during the month of June 2015. ■

Prices of coconut oil , copra and coconut at various marketing centres during June 2015

Date	Coconut Oil (₹/Qtl)				Milling Copra (₹/Qtl)					Edible Copra (₹/Qtl)	Ball Copra (₹/Qtl)				Dry Coconut	Coco- nut	Partially dehusked Coconut		
	Kochi	Alappu- zha	Kozhi- kode	Kan- gayam	"Kochi (FAQ)"	Alappu- zha (Rasi Copra)	Kozhi- kode	Kan- gayam	Ambaji- peta	Kozhi- kode	Kozhi- kode	Tiptur	Ban- glore	Ar- sikere	Kozhi- kode	Nedu- man- gad	Ar- sikere	Ban- glore	Mangalore (Grade-1)
	(₹/1000 nuts)																		
07.06.15	12717	12300	13567	11222	8342	8425	8575	7600	7700	13783	12075	12933	16625	11166	10567	13083	13400	17000	17000
14.06.15	12450	12167	13500	11411	8150	8325	8550	7617	7633	13108	11542	12892	16000	11328	10500	10500	12667	17000	17000
21.06.15	12400	11900	13500	11422	8100	8217	8550	7825	7900	12950	11375	13351	14833	12941	10500	10500	13500	17000	17833
28.06.15	12300	11850	13433	11189	8025	8225	8492	7683	7767	12817	11250	13467	13500	11490	10350	10500	12505	17000	18000
30.06.15	11800	11600	12900	10700	7625	8000	8125	7300	7500	12850	11375	13300	13500	11571	10350	10500	11500	17500	18000
Average	12333	11963	13380	11189	8048	8238	8458	7605	7700	13102	11523	13189	14892	11699	10453	11017	12714	17100	17567

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.