INSIDE

THEME

Innovative Coconut Entrepreneurs

Let us make our country the world leader in non-traditional, value added coconut products

Dear coconut farmers,

We have already entered into the 12th Five year plan from April 2012. The vision of the Board is to take India to the number one position in coconut sector, in production, productivity and processing for value addition and exports. Our prime focus is the financial and social upliftment of the coconut farmers. Compared to the previous plan periods, Board is committed to enter into more farmer friendly activities during this Five Year Plan. Board is already in the process of uniting the small, marginal and fragmented coconut holdings under the common platform of the Coconut Producers Societies (CPS), trying to provide more opportunities for the CPSs in the formulation and implementation of the projects and also trying to identify solutions for the existing problems of the coconut sector. This issue of the journal is an attempt to encourage and motivate farmers and processors to accelerate the coconut processing and value addition. The success stories of a few best innovative coconut based entrepreneurs are presented in this issue. We are hopeful that this would motivate more farmers and farmer producer organisations like CPS s to this field.

While thinking on processing and value addition, let us look into the basic detailed statistics of the coconut situation in India. Coconut is cultivated in 18.94 lakh ha. and the country is producing 15730 million nuts. India holds the second position in coconut productivity and the third position in production globally. The per hectare productivity of the country is 8303 nuts per annum.

But we lag far behind Philippines, Thailand, Brazil, Indonesia, Malaysia and even Sri Lanka in processing, value addition and exports. Export of value added coconut products from a small island nation like Sri Lanka is about four times that of India. The area under coconut in Sri Lanka is 3,95,000 ha, production is 2,619 million nuts and the productivity is 6,630 nuts. Area and production of Sri Lanka is 20.84% and 16.65% of area and production of India respectively. Sri Lanka holds the 4th position in area, 6th position in production and the 8th position in global productivity. Even though we are way ahead in area, production and productivity of coconut compared to Sri Lanka, we lag far behind in processing, value addition and export. Hence it is high time to focus on these areas in the 12th Five Year Plan Period.

Ensuring remunerative and steady price for coconut and forward integration is essential for providing better prospects to coconut farmers. This is crucial for creating more employment opportunities and for accelerating the export earnings from this sector. Shifting from traditional products to innovative non traditional coconut products is the need of the hour for ensuring price stabilization. As an array of value added products can be developed from coconut, we must work for changing the existing scenario that copra and coconut oil alone dictate the price of coconut. At present only less than 10% of the total production is utilised for processing and value addition. This needs to be scaled up manyfold and make our presence felt in the domestic and international market with more value added products. This calls for a situation wherein we should have to enhance production and productivity. Steady and a profitable price for the product is the first step required for increasing productivity. The next step is ensuring best value from the existing farm. Coconut and coconut products are witnessing a steady growth both in the domestic and international markets. For betting a decent share in this emerging demand, we must have more

and more coconut based enterprises, coconut processing units and more value added products. The price fall during the prime productive season from January to May can be arrested if we utilize at least 25% of our total production for tender nut purposes and another 25% for making value added products other than copra and coconut oil. In order to attract more entrepreneurs to this sector, Board is extending the technology and also 25% capital subsidy. We had addressed the four southern states, who together account for 90% of the production in the country to give extra support to new entrepreneurs who are coming out with innovative, value added coconut products. Responding to this request, Government of Kerala has already made the budget provision for another additional 25% subsidy to new coconut processing units over and above the 25% capital subsidy by the Board. This is an encouraging model for the other state governments to follow to attract more investment to this sector.

How can we explore the possibility of bringing more value addition in coconut sector? Under the Technology Mission on Coconut programme, Board has given financial assistance to 99 units in Kerala, 45 units in Tamil Nadu, 11 units in Andhra Pradesh, 24 units in Karnataka,1 in Goa, 1 in Odisha, 1 in Jammu Kashmir, 1 in Maharastra and 2 units in Lakshadweep. Can we think of a five fold increase in this during 12th Five Year Plan?

The present statistics on the area and production of coconut of various states show that there are more than 20 districts in the major coconut growing states which are having more than 25000 ha. of area under coconut. Can state governments think of taking up specialized coconut parks in such districts. The budgetary allocation made for the coconut sector by the government of Kerala is very much encouraging.

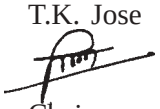
The industrial environment in the states of Tamil Nadu, Karnataka and Andhra Pradesh are congenial for vast promotion of coconut based industries. Making available the land for industrial purposes and also getting required clearness from Pollution Control Board will be more easy in these states. It is not easy for the individual entrepreneurs to have land of his own for starting new ventures. Hence we must encourage and promote more 'coconut parks' in all the major coconut producing districts in all states. In Kerala, KINFRA and KSIDC have initiated the preliminary steps. KSIDC has already taken possession an extent of 135 acres of land at Kuttiyadi in Kozhikode district for a 'Kera Park'. KSIDC expects to complete the process during this year itself. KINFRA has already identified land for similar project in Thrissur district. Government of Kerala has declared three coconut Bio parks in the state during 2012-13. Such models can be followed by all the other state governments. Hon'ble Chief Minister of Kerala convened a meeting of the experts in coconut sector on 18th April 2012 and took decision for the speedy execution of the declarations made for coconut sector in the state budget.

Our country is going to host the 45th COCOTHECH meeting of the APCC during 2-6 July, 2012 at Kochi. This is the most important forum of APCC where producers, manufacturers and exporters from all the eighteen member countries are participating. This biennial conference is coming back to India after 12 years. So let us make this an opportunity to attract more entrepreneurs in the field of value added products from coconut. Also this is an opportunity to interact with world leaders in the field of coconut products from leading producers.

Now it is the turn of coconut farmers and farmer producer organizations to respond positively to these initiatives. Our farmers must come forward to take advantage of this favourable situation and to associate with such ventures. Within the next five years we have to make a quantum leap in coconut processing, value addition and export.

Soliciting the whole hearted co-operation of all,

T.K. Jose



Chairman

Technology Mission on Coconut- in support of entrepreneurs

Remany Gopalakrishnan

Introduction

When the Coconut Development Board was established in beginning of 1980s the technology development for product diversification and byproduct utilization in coconut was almost nil or in the budding stage. On the other hand, the technologies available in coconut cultivation, production and protection in India were rated as number one among the other coconut growing countries like Philippines, Indonesia, Sri Lanka, Malaysia etc. In value addition, however, these countries were far ahead. An analysis of the utilization pattern prevailed in the country two decades ago would reveal where India stood in the area of vale addition.

Since time immemorial, coconut has been an indispensable item in religious, cultural and social functions throughout the country. Mature coconuts were mainly used for household culinary purposes, making milling and edible copra and for the manufacture of desiccated coconut. Though the cultivation of the crop was concentrated in coastal tracts, its demand was widespread. Kerala was the prime cultivator, producer and consumer. The consumption in the state was limited to the kernel and oil to a great extent and tender nuts to a limited scale. In other south Indian states the utility was mainly confined to tender nuts, social and religious purpose. Coconut oil was used mainly in toiletry sector. In states like West Bengal it was more valued as a beverage crop than any other utility aspects. For the non-traditional, north and north-eastern population coconut is a fruit of reverence utilized for offerings and auspicious occasions. At the national level coconut is valued as a food, beverage, oilseed and fibre yielding crop. The utilization pattern of coconut in 1980s was that, fifty two percent of the total coconut production was used in the form of raw nuts for edible and seed nut purposes, 10% as tender coconut and roughly 40% for copra production, both milling and edible. Only less than 5% was processed into products like desiccated coconut and other coconut based food products. The price of coconut was controlled by the coconut oil industry which consumed only less than 40 % of the total production.

Technology development centre- the stpping stone in coconut value addition

The prevailed situation warranted to evolve strategies to canalize the major portion of coconut production in the country for manufacturing value added coconut products. The Board

therefore started giving thrust to the area of product diversification and value addition. A Technology Development Centre was approved in the VII Five Year Plan Period which was the stepping stone in the area of technology development in the country. Research projects were sponsored through reputed institutions like Central Food Technological Research Institute, Defence Food Research Laboratory, and Regional Research Laboratory for development of appropriate technologies which have resulted in value addition in coconut and emergence of variety of products in edible and non-edible sector. The technologies thus developed for coconut cream, coconut spray dried milk powder and packed tender coconut water were the milestones which paved the way subsequently for starting many coconut based industrial units in the country. It was a realization that diverse range of value added coconut products has considerable economic value and market potential. Similarly the studies conducted through the Bio-chemistry department of Kerala University on the effects of consumption of coconut kernel and coconut oil on the serum lipid profile and through Sree Chithira Thirunal Institute of Medical Sciences and Technology on the effect of coconut oil in influencing the cholstrol levels in coronary artery disease patients were great revelations which could dispell the misconception on the consumption of coconut and coconut oil.

Technology Mission on Coconut (TMOC) to ease the burden of entrepreneurs

When the Board completed its journey of two decades most of the processing technologies based on coconut kernel, coconut water, husk and shell were evolved and available with the Board. Still potential entrepreneurs were not freely coming forward for want of sufficient capital investment. It was at this juncture the Government of India cleared the Technology Mission on Coconut in 2001-02 for vertical and horizontal integration of programmes and to bridge the existing gaps in Research and Development in coconut. Technology Mission provides grant in aid for setting up of coconut based industries under 'Adoption of Technologies'. Production units of preserved and packed tender coconut water, virgin coconut oil, spray dried milk powder, desiccated coconut, shell powder, charcoal and activated carbon are the successful outcome of commercialization of technologies developed by the Board and adopted by entrepreneurs.

Admissible grant in aid under adoption of technologies

The Mission provides back-ended credit capital subsidy to technically and financially viable projects. The subsidy is limited to 25% of the project cost but not exceeding Rs.50 lakhs for infrastructure development, establishment or modernization and up gradation of coconut based processing units. Registered societies, NGO's, entrepreneurs, individuals and any other institutions having capacity to adopt technology are eligible for this assistance. All the proven technologies in processing and product diversification are eligible components. The promoter can avail subsidy from the State Government agencies besides the 25% assistance available from the Board. But the total subsidy availed should be below 50% of the project cost altogether. The Government of Kerala in its recent budget has already announced 25 % assistance to the new units entering the field.

Terms and Conditions

The scheme provides scope for expansion and modernization of coconut processing units. Works, which are undertaken and machinery/equipments purchased after the date of submission of project to the Board are considered for financial assistance. The materials used in all fabricated machinery and other machinery/ equipments should satisfy ISI standards.

Other conditions for availing assistance are that the promoter has to avail at least 40% of the project cost as term loan from a bank or financial institution of his choice. The cost of land development, construction of building, electrification, machinery, its installation and know-how fee are considered for subsidy. Plant and machinery will not include office equipments, computers, air conditioners etc. Civil works like staff quarters, guest house, canteen

etc are not considered for subsidy. Contingent expenditure, cost of vehicle, working capital margin etc. are not considered for working out eligible subsidy.

Annual statement of accounts duly certified by a Chartered Accountant is to be invariably submitted regularly by the beneficiaries. In case the project is abandoned midway or the term loan availed from the bank is closed within 3 years of availing the same the unit will not be entitled to any subsidy. In such cases, the subsidy available in the subsidy reserve fund should be returned to the Board by the Bank/FI as the case may be. All the projects having a capital investment of 100 lakhs and above shall engage qualified technical experts to ensure professional/management and technical supervision of the units. In case any imported technology is adopted in the project, Indian Embassy/Consulate of that particular country should vouch such acquisition/transfer of technology. The small units should obtain AGMRK/ BIS standards for their products and bigger units should have GMP and HACCP/ ISO certification. The products should be tested periodically at Board's Quality Control Lab at Vazhakulam, Aluva, Kerala.

Documents to be submitted

The entrepreneur should submit the duly filled in application form along with the following documents.

- Detailed Project Report
- Bank/Financial Institution's Appraisal Report
- Bank/Financial Institution's Term Loan Sanction Letter
- Certificate of Incorporation, Articles and Memorandum of Association/ Constitution of the Organization/ Bye laws/ Partnership Deed etc. of the organization.
- Bio-data of the Promoter(s)/ Director(s)
- Previous experience, if any, in running such a project or any other type of project.
- Quotations/proforma invoices etc. from the suppliers of plant & machinery and equipments etc., required for the project.
- Blue print of the factory-building plan, plan approval of Municipality/Corporation/ Panchayath along with estimate.
- Audited Statement of Accounts for the last three years, wherever applicable.
- Sources of procurement of raw material required for the project.
- Marketing strategy proposed to be adopted
- Manufacturing Process/ Source of Technology
- Statuary clearance / permission from Panchayath/ Industry Department
- Implementation Schedule should indicate among other things-(i) date of acquiring land (ii) date of commencement of construction works of building (iii) date of completion of building (iv) date of placing orders for plant & machinery (v) date of installation/erection (vi) date of trial production (vii) date of commercial production.
- No objection certificate from State Pollution Control Board
- Notarized English version of Land Document (in case it is in any of the regional languages)
- Financial Benchmarks/ parameters duly certified by the concerned Bank
- Calculation of value addition.
- Item-wise and cost-wise details of technical civil works envisaged.
- Item-wise and cost-wise details of plant & machinery envisaged
- If commercial production has already commenced, the date of commencement.
- Approval of Drug Control Authority in the case of medicinal products.
- Any other relevant information/ document.

Clearance of the project

A Project Approval Committee

(PAC) approves the projects vetted by the Internal Screening Committee, the members of which are drawn from the division heads of the Board. The eligible subsidy is released by way of cheque/DD in installments as described in the MoU, to the subsidy reserve fund of the promoter.

Payment schedule

Release of first installment of subsidy shall be subjected to the fulfillment of the conditions in the tripartite MOU executed between the Board, Financial Institution and the Promoter. Fifty percent of the loan should be availed by the promoter before granting the first installment. For release of second installment the promoter has to avail full loan sanctioned by the bank. The promoter shall submit an asset accrued statement as per the MoU duly certified by the Bank/ CA along with list of machineries and cost, building completion report by the engineer. A joint inspection of the unit by the Bank and CDB will be undertaken in the presence of the promoter. Final payment of subsidy is released on receipt of a satisfactory completion report and on stabilizing the production as per the MoU. Month wise production details for three months have to be submitted by the promoter before availing the final installment of subsidy.

Facilitating Market Promotion

The manufacturers assisted under the adoption of technologies will continued to be supported by the Board in the marketing of products. They are given opportunities to exhibit and sell their products in national and international exhibitions and fairs. This will provide platform for the manufacturers to build up marketing channels and business tie ups within and out the country. Market promotional assistance for brand promotion, through electronic and print media is also given and the maximum eligibility for such assistance would be Rs. 10 lakhs on reimbursement basis for each product.

Current Status of the processing units and the way forward

The opportunity available under TMOC was utilized by prospective entrepreneurs and manufactures of coconut. Now 118 Integrated coconut processing units are functioning in thelength and breadth of the country i.e., 99 units in Kerala, 45 units in Tamil Nadu, 11 units in Andhra Pradesh, 24 units in Karnataka, 1 in Goa, 1 in Odisha, 1 in Jammu Kashmir, 1 in Maharashtra, and 2 units in Lakshadweep. Among these units the Activated Carbon units in Tamil Nadu and Kerala, Suryasobha Milk Powder unit in Thrissur, Coconut Shell Powder units in Jammu Kashmir and Karnataka, Mosons Extractions in Kannur and Nesco Foods in Kalady in Eranakulam district are some of the prestigious units in the processing sector.

Unlike Kerala, the industrial environment in the states of Tamil Nadu, Karnataka and Andra Pradesh are congenial for promotion of coconut based industries. Since it is not so easy for the individual entrepreneurs to start new ventures, we must encourage and promote more units through farmers community groups/cooperatives. The initiative of the Board in forming Coconut Producers Societies and their Federations and Companies will definitively help bring a many fold increase in the number of processing units and a revolutionary transformation in value addition in coconut which is the only ***mantra*** before us for ensuring profitability and sustainability in coconut sector.

Deputy Director, CDB, Kochi-11

New Generation Coconut Entrepreneurs

Jayashree. A and K. Muralidharan

Product diversification in coconut and development of value added products have become extremely important for the survival of coconut industry. The Coconut Development Board through a series of sponsored researches has been successful in evolving appropriate technologies for the profitable utilization of some of the value added products of coconut. As a result, products like virgin oil, packaged tender coconut water, packed coconut milk, coconut cream, spray dried coconut milk powder, defatted coconut powder, sweet coconut chips, coconut water based products like snow ball tender coconut, coconut water concentrate, vinegar, nata-de-coco, etc were developed with potential commercial exploitation thereby ensuring attractive return to the producers.

Entrepreneurship is becoming a hot field for young people. Today's promising market conditions have been encouraging to the young generation who are confident that they have skills to achieve which was considered impossible so far. They are not typical and conventional business entrepreneurs eventhough most of them are the educated children of traditional business men in coconut, copra and coconut oil trade.

These young folks have an unbridled enthusiasm and a fierce desire to succeed. It is clear that the dynamic future for coconut products has turned a little bit higher with the arrival of these people. Thus today we find engineering graduates relocating from Tamilnadu to Jammu, MBA's venturing into coconut oil, virgin coconut oil and tender coconut water processing. Gulf returnees and retired officials investing in coconut enterprises and venturing into coconut milk powder, shell powder, activated carbon etc. Here we present a few young entrepreneurs for whom encouragement, motivation, technical and financial assistance were extended by the Board under TMOC programme and they had taken their coconut products to the world scenario with their innovative ideas.

The success stories of these young entrepreneurs in coconut sector would continue to inspire people to invest in coconut related business.

The 'Indulekha' story

Fayas M.P is the CEO of Mosons Extra-ctions, one of the largest selling brand of Virgin Coconut Oil in India. Mosons Extractions had a humble beginning when A. C. Moosa in 1976 set up a desiccated coconut manufacturing unit. The simple thought behind such an idea was to make use of coconut which was available in abundance instead of turning to any other business. Today Mosons have a 100 crore turn over business of Virgin Coconut Oil with its 'Indulekha' brand.

The company grew under his mentorship and went on to include coconut oil and coconut shell powder manufacturing unit during eighties. The legacy was continued when his son Anwer M. P. brought in an additional coconut dehydrating unit, coco-vinegar unit and Nata-de-coco unit.

During 2008 the company decided to divert its production to VCO, when the product was at the emerging stage in India. Later on Fayas after completing his Industrial Psychology course from Madurai Kamaraj University joined the firm. Initially they had to tackle many hurdles. He concentrated on

the product diversification of VCO and created a separate market strategy for the product. Value added VCO products for hair care with herbal extracts, skin care products etc. were added. Distributors were engaged for the product and wide advertisement programmes were chalked out for creating awareness on the benefits of coconut milk and virgin coconut oil. The products are presented in a variant and different packaging. Knowing the pulse of younger generation the company launched each product with specific application. The company was anxious to extend its services in hair care and skin care products. virgin coconut oil based products like after-shave lotion, baby massage oil, hair and skin care products were launched. These products were well accepted in the market in a very short time. Customer distinguished these products also by its quality and price.

"Quality is our motto, and commitment our unique selling proposition. It has taken 32 years of commitment for the company to become synonymous with coconut based products. We are perfecting us each day and effort will continue to provide quality products to the world" says Fayas of the third generation who is leading the company now. It has an emerging acceptance in other states of the country also. 80% of the product is being exported to Middle East countries. 'Soon we would be launching surprising products with VCO as base in the market' he asserts confidently.

Board has extended technical and financial assistance for establishment of the VCO unit under Technology Mission on Coconut programme. Now at the age of 27 Fayas is in front of us with an array of Virgin Coconut Oil based products viz. Indulekha Bringha hair care oil, Indulekha Skin care oil, Indulekha coconut milk shampoo, Indulekha white soap, cream etc. They are having ten products in the pipeline and hopes the launch in a phased manner. They are targeting to achieve 350 crores turnover by the end of this financial year.

"Our goal is to exceed the expectations of every client by offering outstanding customer service, increased flexibility, and greater value" says Fayas.

Address: Mosons Extractions, Industrial Estate, Palayad, Thalassery, Kannur District. Email: mosonsextractions@ yahoo.co.in

ISO certified 'Super Coco' powder

A. Sakthivel, 42 and A.Nazeer Ali, 38 are the key promoters of Super Coco Company a desiccated coconut powder manufacturing company based at Coimbatore. Both the promoters are from agricultural family and were involved in coconut and copra trade since the past 15 years. Later, in 2005 they ventured into manufacturing of desiccated coconut powder by taking on lease a unit which was having a capacity to produce 1MT desiccated coconut powder per day at Sakthi Co-op Indl. Estate, Pollachi and gained sufficient experience in the manufacturing and marketing of desiccated coconut powder. After gaining good exposure and experience, they established a new state of the art processing unit with a capacity to manufacture 6 MT of desiccated coconut powder per day as a partnership firm along with S.Samundeeswari, 39 wife of A.Sakthivel also as a partner.

The promoters are having sound knowledge in coconut field and are well versed in this line. The product is having good market potential in North and North Eastern India as well as in South. They are marketing the product under the brand names 'Sree' and 'Jaisree'. The unit has also obtained ISO 22000 HACCP certification.

Since the unit is situated in an industrial area it is having all the required infrastructure facilities. The major raw material required for the unit is fully matured coconut. The unit is ideally located in an area where coconut farms are in plenty. Hence availability of raw material is not at all a problem for them. High power and water are the major requirement of the unit which is available in the industrial estate itself.

The unit can process 60000 nuts per day for manufacturing 6 tons desiccated coconut powder per day. The product is marketed mainly in North India due to the high demand in confectionery and biscuit industry because of its longer shelf life and low wastage. It is also used in the preparation of sweets and chikkies. Restaurants, canteens, chikki manufacturers, food processing units and caterers are bulk consumers of this product. The fine and medium grades are being exported.

The company started commercial production in 2008 with a capacity of 2 MT per day which subsequently increased to 5 MT. The year 2011 was comparatively a good year for desiccated coconut powder manufacturers when the domestic price ruled at Rs. 90-100 per kg. Of late the market rates have come down to Rs. 75-80 per kg. Export is done through merchant exporters who procure the product at about Rs. 85 per kg. Coconut Development Board has extended financial assistance to this company to the tune of Rs.19.12 lakhs for the project of Rs.76.48 lakhs. The unit is now running at its 80% capacity. The finished product is packed in 1 kg, 2 kg and also in bulk packing in 25 kg bags.

Address: Super Coco Company, N.12, Sakthi Co-op Industrial Estate Udumalai Road, Pollachi-642 003 Coimbatore, Tamilnadu

'Palmo' – First in India

Rajendran, an unassuming, yet enterprising personality ventured into the commercial production of spray dried coconut milk powder, fascinated by the potential of marketing spray dried coconut powder both in India and elsewhere in the world. Shriram Coconut Products Ltd., (SCPL) was incorporated in 1994, mainly to set up the plants for the manufacturing of value added coconut products.

SCPL considered various products and had decided to take up the preservation of coconut milk by dehydration into powder. Rajendran, already an industrialist, set up the first and unique unit M/s. Shriram coconut products at Batlagundu, Tamilnadu with an investment of Rs.3.5 crores having a production capacity of one ton coconut milk powder per day from 20,000 nuts. According to Rajendran, as the project was innovative and only four units were functioning at that time, he faced difficulty in availing the financial assistance for setting up the plant. Since the project was unique in the country, most of the

equipments had to be fabricated only after many commercial level trials in the actual plant, which had enhanced the cost of the project. Packaging materials were also selected after many trails with various materials for different variants. Many changes had to be implemented in the infrastructure after the commercial production was taken up to suit the product behavior.

The spray dried coconut milk powder is a product of convenience. The shelf life of the freshly extracted coconut milk is extended from 2 hrs to more than 2 years by dehydration. Storage space is minimized and the product can reach any part of the globe economically and stay longer in the shop shelves and in the kitchens. Despite these advantages the promoters found it difficult to create an awareness for the product among the consumers then. SCPL has managed to establish the product as it was supplied at a competitive price as all the other by-products had been realized at better prices in the country. SCPL had developed its property product recipe to suite all its customers taste and all are satisfied with the taste and aroma of the product.

Presently the plant produces 600 MT coconut milk powder per annum and 400 MT of low fat desiccated coconut or coconut dietary fibre as by–product besides producing 1500 ton desiccated coconut annually. The capacity utilization of the plant at present is 75% of the installed capacity. The plant is periodically updated. Capacity of the plant can be increased according to the requirement of the market demand. They are planning to go in for product diversification by canning coconut milk and tender coconut water and to develop virgin oil from coconut milk.

Rajendran is assisted by his son Kannan, who is now the managing director of SCPL. He is an engineering graduate and had undergone training in Management of Food Processing Industry at CFTRI, Mysore and in Packaging Technology from the Indian Institute of Packaging, Chennai. He has also worked in modern coconut processing industries abroad.

India could make an entry for the first time into the export market of coconut milk powder through Shriram coconut products. This gives immense satisfaction to Rajendran, fulfilling his desire of being a pioneer in the field.

Address: M/s Sri Ram coconut products Ltd Dindigul Road, Batlagundu, Tamilnadu 624202, Email: mailto@palmo.biz

The 'Keratech' story

Adv.K.V.Mohanan, the founder Chairman of the Keratech Company hails from a middle class agricultural family from Engandiyoor Village of Chavakkad Taluk in Kerala. Coconut cultivation, copra processing, trading of coconut fibre and coir products were the family business. After his graduation in Economics, he went to Mumbai, from there to Bahrain and worked for twenty years as an administration manager in charge of production and marketing. Keratech is a consortium of five independent virgin coconut oil manufacturing units in the districts of Trichur, Alleppey and Ernakulam. The directors of the company are Gulf returnees and their dependants.

The unit was started with a vision to generate employment opportunities in the villages by utilizing agri raw materials from the neighbouring villages to produce value added agro products so as to enable the farmers to get a remunerative price for their products. Initially the Kairali VCO unit was started with production of VCO (DME process) as a join venture with 'Rubco' with buy back arrangements. Since Rubco could not fulfill their commitments to the promoters satisfaction, the consortium 'Keratech' was formed and started marketing the product by themselves.

The project was financed by various financial institutions like SBT, Canara Bank and SFAC. Since VCO has been a new concept and a new product at that time there were no possibilities for market surveys. Even then they studied the international markets through internet and sensed the increasing trend for the product. The unit commenced commercial production during August 2008. Keratech VCO manufacturing facility has a capacity to process 15000 coconuts into 900 litres of VCO and 1200 Kgs of defatted coconut powder. Raw materials are available in abundance from the neighboring villages of Chavakkad Taluk. The company has also obtained ISO 9001-2008 certification. The technology for VCO was

availed through CDB from CFTRI, Mysore. CDB has also provided financial assistance under the TMOC programme.

The product is marketed under the brand name Virgin Plus extra virgin coconut oil. The products are marketed in all districts of Kerala and cosmopolitan cities like Mumbai, Ahmedabad, Jaipur, Pune, Nasik and Coimbatore. The product is also exported to U.K, USA, UAE, Qatar, Singapore, New Zealand and Bahrain. Annual turnover of the unit in 2011-12 was Rs.70 lakhs.

The unit is on working profit from the third year onwards. Presently product variants include organic virgin coconut oil, virgin coconut oil, hair cream, massage oil, baby oil, mouth refreshner and virgin capsules. Products like hair oil, shampoo, lip balms and coconut jam with honey are in the pipeline.

'Our aim is to establish a mini industrial estate exclusively for value added agro products like desiccated coconut powder, coconut chocolates, hair oil, soap, vinegar, soda from coconut water, tender coconut water plant and activated carbon unit in Vatanappilly village' says Mohanan while acknowledging the financial and moral support extended by Chairman and officers of CDB.

'Assistance and guidance from CDB to place the products in defense canteen and railway stations and trains through proper channel will help the entrepreneur in a great way. Coconut based entrepreneurs association under CDB will also help to communicate, interact and share the problem faced by the entrepreneurs and to find out remedies for it' concludes Mohanan.

Address: Keratech Coconut Oil Manufacturing Company (P) Ltd., 1/332 B, P.O.Engandiyur, Trichur 680615. EMail: info@keratechindia.com.

Coconut shell powder from Jammu

S. Saravanan and A.S.Senthil Kumar from Erode, Tamil Nadu were dare enough to start a shell powder unit in Samba District of Jammu during 2008 with an investment of Rs.1.36 crores. Shri. Saravanan aged 31 years is an engineering graduate having 9 years of business experience in civil construction jobs. Shri A.S.Senthil Kumar, 32 has done BA (Eco.) and posses around 12 years experience in the industrial line dealing mainly with manufacturing and marketing of turmeric, chillies, coriander powder and other spices. Apart from this he was also involved in the marketing of coconut shell powder. With this experience, they decided to start S.S. Agro Mills, a unit for producing shell powder.

Before starting the unit alongwith 5 other partners, intensive study on the raw material availability, marketing of the product and all other requirements for setting up the unit was undertaken. Finally they planned to setup the unit in Samba in Jammu since there is a huge demand for coconut shell powder from mosquito coils manufactures having their production base at Jammu. The unit procures the broken coconut shell chips from Kerala, Tamilnadu and other coastal areas for pulverizing in the plant at Samba, Jammu. All the

leading manufactures of mosquito coils have their manufacturing plants in Jammu and a few of them are located at IGC, Samba near the unit itself. Since the promoters belong to Southern region of the country and have good contacts with the coconut shell dealers, the availability of raw materials is not at all a problem for them and also the transportation of raw materials from Tamilnadu to Jammu by rail is quite affordable. Cost of production in Jammu is very low due to incentives from state governmnet.They could also availed exemption under income tax for 5 years and sales tax for 10 years as well as power availability at 50% lower cost compared to Tamilnadu. Eventhough they had envisaged a capacity of 180 MT per annum against which they could achieve only 100 MT during initial years. With the provision of full electricity load to the unit, both the pulverisers are running throughout

the day. The proper feedback is maintained by the promoters to meet specific requirement of the consuming units.

The total cost of the project is Rs.136.07 lakhs and financial assistance extended by the Board under TMOC programme is Rs.15.92 lakhs. The turnover of the unit during 2010-11 was Rs. 1.80 crores. They also have plans to set up another unit in Erode, Tamilnadu.

Address: S.S. Agro Mills, R/O Ward No.133, Opp. PWD Rest House, Samba District, Jammu 184 121, E-mail: SAP.ind@gmail.com

Indo German Carbons Ltd. –The Pioneer

Indo German Carbons Ltd (IGCL) is promoted by a group of highly successful industrialists having international operations in diversified fields. Galfar Engineering and contracting LLC, established in 1972 in the Sultanate of Oman is the parent company. Dr. P. Muhammdali, Chairman of the group is the main promoter of IGCL. M.M Abdul Basheer is the founder Director of the company. IGCL incorporated in the year 1995 was commissioned in 1998, which was then the first and the largest world class activated carbon plant in India. The factory is located at Binanipuram, Kochi.

According to Basheer, the IGCL plant incorporates state of the art manufacturing and control equipments with a fully integrated production facility. The strength is its in-house production facility. The plant and technology have been sourced from Germany and the erection, start-up and

commissioning was completed under the supervision of overseas experts. It is today the only activated carbon plant in India with a sophisticated waste-heat recovery system designed for co-generation of power. The company has also obtained ISO 9001-200 certification. IGCL's hi-tech manufacturing facility can produce tailor-made grades of activated carbon to meet specific customer requirements.

Driven forward by the ambition to meet the challenges and requirements of their global customers the company underwent rapid expansion and modifications. From 3970 MT of activated carbon in 2005 the present annual production capacity has reached around 4600 MT. The company is planning to launch a subsidiary unit in Karnataka so as to enhance the production level to 6300 MT, says Mr.Basheer.

Coconut Development Board, under the TMOC programme has provided financial assistance to the tune of Rs.41.00 lakhs for the plant during 2008. The company is having facilities like acid washing system, drying system for acid wash, water washed carbons, micro pulverizer, specialty screens etc. for specialty applications. Being a 100% export oriented unit, IGCL earns foreign exchange to the tune of Rs.40.00 cores. IGCL has won various awards like CEPZ Export Excellence Awards 2003, CAPEXIL Best Exporter Awards 2006 and Best Exporter Award from Coconut Development Board.

Address: Indo German Carbons Ltd, 57/3 Old Mosque Road, Edayar Industrial Area Binanipuram -683502, E-mail: info@igcl.com.

At last coconut ice-cream in coconut cups

C.R. Manoj, 42 is the Managing Director of Nexus Frozen Fruits Containers & Foods Pvt. Ltd, Kalady a partnership firm with European collaboration producing coconut shell cup containers for packing ice cream. Manoj, a native of Chengamand in Ernakulam district had a very humble beginning. After his graduation, he worked for 3 years in Premier Cables, Karukutty. The company locked out due to financial crisis and he became job less. It was then he decided to start his own business in a manageable field. During job hunting and seeking business opportunity, he met Mr. Xavier, a Spanish gentlemen at an Export House at Kochi which made the turning point of his life. The information provided by him regarding the potential of coconut shell made ice cream cups and its huge market in Europe made him to try in this line. Coconut shell based ice cream cups is one of the products, which finds use as natural bio degradable container for ice creams. It is a most sought after item for serving ice cream especially in foreign countries like Spain, UK, USA and other west European countries.

The availability of raw material at affordable rate was the initial problem to start the business. He travelled from Trivandrum to

Ice Cream cups

Kasargod, dropped at every point and made enquiries at copra processing units, coconut buyers etc. in search of raw material. Finally he made arrangements for getting shells directly from copra yards. He located a marshy land and started an SSI Unit during 2006. Local male and female workers were given training in buffing, cleaning of shells etc.

'Financing of the project was the next hectic job. We approached a number of Banks for one lakh rupee as loan in the initial stage and everybody turned down our request even without visiting the unit and analyzing the project. They had doubts regarding feasibility of the product. Finally, Union Bank of India, Kalady Branch advanced Rs.one lakh loan after 12 months of negotiations' says Manoj.

In continuation of the preliminary studies done on the availability of raw material and working strategy it was decided to purchase coconut itself, dehusk, cut, make copra, sell it, and keep the shells required for the unit. This resulted in raising a small income from the sale of husks and copra. Also the desired level of raw material for the industry was available. Nut is being procured in bulk from suppliers in and around and now also from Tamilnadu. Prompt payment and good dealing resulted in regular supply of nuts.

Bird feeder

Mr. Xavier, the Spanish gentleman who gave the idea invited him to Spain, gave a commitment to purchase the entire produce provided it meets the required standards and quality. Entire operational product line was provided by Mr. Xavier with proper quality control tests. The unit has obtained HACCP certification to maintain international standards. The entire volume of ice cream cup is exported to Barcelona, Spain in Europe. The brand name for ice cream containers is 'NEXUS' .

Gradually the unit has started manufacturing frozen fruit containers using mango, pineapple, orange and other fruits and ventured into manufacture of ice cream with diverse flavours packing in natural fruit containers. The unit is established in 3 acre premises with a capital investment of Rs.2 crores. Ice cream made of coconut cream and desiccated coconut is marketed under the brand name Nesco. There is an increase in the demand for coconut ice cream in domestic market. 40000 – 50000 ice creams are sold every month in Ernakulam itself. Apart from this they are exporting 2-3 lakhs of bird feeder made up of coconut shell every month to Europe and Germany. Since it is a labour intensive product they are not in a position to meet the export demand for the product. Now he is thinking of starting a coconut vinegar unit from coconut water.

Present capacity of the unit is 25 to 30 thousand pieces per day and capacity utilization is 80 %. Annual turn over of the unit is 1.5 to 2 crore per annum. The unit is running on a 10% to 12% profit. Coconut Development Board has extended assistance for modification of their existing unit under the Technology Mission Programme.

Address: Nexus Frozen Fruits Containers & Foods Pvt. Ltd, XI/277, Manickamangalam P.O, Kalady, EKM Dist – 683574. Email– nexusfrozen@sancharnet.in.

Senior Technical Officer & Director, CDB, Kochi-11

Think different, act different and that makes a difference

Deepthi Nair S

Coconut is closely linked to the culture and heritage of our country. It is part of the religious ceremonies, traditions, values and beliefs of the society. Tender coconut water has been consumed since time immemorial as a nutritious drink, as a rehydrating agent and even given intravenously. When coconut palms are in plenty, when tender coconuts are available fresh throughout the year, nobody even gave a thought of packing tender coconut water.

It is here that Mr. Ajay Kumar Jain thought differently. He is a Commerce graduate with an Honors in Marketing who hails from Guwahati. He felt that if one could pack water and market it, why not pack a highly nutritious natural drink like tender coconut water. There were a multitude of fruit drinks in the market, but not even one from coconut. The conceptualization of packed tender coconut water thus started in 1997 under the brand name cocojal.

Mr. Jain did a thorough study on the coconut scenario in the country and focused on Pollachi and Maddur for his venture. Ultimately he felt that Bangalore was the ideal place to base his venture owing to the availability of tender coconut from Maddur tender coconut market and proximity to food processing research institutes like CFTRI and DFRL. During the same period, Mr. Jain came into contact with Coconut Development Board.

It was all a timely coincidence. CDB had developed the technology for the processing and packing of tender coconut in association with DFRL and wanted to commercialise the product. The Board was in the process of releasing advertisement for initiatives from interested entrepreneurs for technology transfer. It was at this juncture that Jain approached the Board. Mr. Jain became the first person to be selected for technology transfer. There were a multitude of formalities to be fulfilled before the technology could be commercially put to use. The technology had to be authorized by the Government of India and the industry had to be set up. Though the conceptualisation started in 1997, it took two and a half years to start production.

Mr. Jain started a journey which was not a smooth sail for him. He went through hurdle after hurdle, but stuck on to the objective he had in mind. Commercial production started in 1999 and the product was launched in the Aahar exhibition in 2000. The product in the pouch form was launched in the exhibition by the then Union Minister, Mr. Satyanarayanan. This was the first technology with preservative for tender coconut water. The acceptance he received in the exhibition from the public was over whelming. People were surprised, but happy and the product had very good acceptance. This removed all the apprehensions from his mind and he moved on with increased enthusiasm.

It was a slow and steady journey. The procurement of raw nuts was from the APMC open market at an average rate of Rs. 7-10/nut. Around 13000-14000 nuts are re-

quired for producing a batch of 15000 bottles of product. The market rates is Rs. 20/- per bottle in South India and Rs. 25/- per bottle in North India including cost of logistics. The pick up in the market was slow and he concentrated on Bangalore and Delhi in the initial periods, slowly moving on to the hotter belts of Rajasthan, Punjab and Haryana, avoiding the coastal belts where fresh tender nuts are available in plenty. Market promotion was undertaken with the support of CDB. The product was put for sale mainly in hotels, hospitals, restaurants, super markets etc. It took almost six years to stabilize the position in the market. He made slow investments in marketing strategies. It was mostly mouth to mouth publicity in the initial years.

Having stabilized, he went in for more experimentation. He shifted from pouches to pet bottles. The initial pack was pillar pouches with two layer and then later moved on to standing pouches with three layer. But pouches were not easy to carry and had more spillage. With the assistance of DFRL, he moved on to packing in pet bottles.

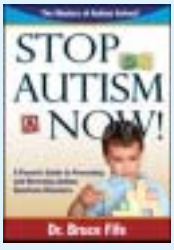
Pet bottles opened up a new overseas market in the Middle East and the US. His export chances grew and the 250 ml pet bottles could establish well defined niche markets. He maintains good quality for the product and has a quality laboratory set up in his unit headed by a chief chemist who is DFRL trained person. One bottle per batch of 150 is tested for quality parameters.

Once the market stabilized he went in for more experimentation and application through variety of products. He mixed coconut water with lime with the assistance of DFRL and had a good response from the public. Later other novelties like coconut water with mango pulp, pineapple juice etc were tried. The unit works single shift 365 days a year excluding Sundays and festivals.

Jain foresees interesting prospects for widening the market base for packed tender coconut. He intends to undertake bulk packaging of tender coconut water in 20 litre containers with a shelf life of one year. He targets sale in offices and commercial establishments. He is also planning to expand the export marketing reaching into more unexplored markets. He is confident and reaffirms, "The technology is good, the adoption is simple, the only thrust is working forward to get established in newer markets". His venture is a mission accomplished successfully, but still prospects for more miles to go and newer frontiers to reach.

Marketing Officer, Coconut Development Board, Kochi-11

Book on Coconut



Stop Autism Now!

A Parent's Guide to Preventing and Reversing Autism Spectrum Disorders. Over the past 12 years there has been a 17 percent increase in childhood developmental disabilities of all types including autism, attention deficit hyperactivity disorder (ADHD), epilepsy, mental retardation, and others. Currently in the United States, 4 million children have attention deficit hyperactivity disorder, the most common learning disability, and an incredible one in six children are classified as learning disabled.

Most doctors have no clue on what causes autism, nor any idea how to prevent or even treat it. The only medically recognized form of treatment is an attempt to teach affected children how to manage the disorder and live with it. Antidepressants, antipsychotics, and stimulants are often prescribed to help them cope with their symptoms. No possibility of a cure is offered, as the condition is considered permanent—in other words, hopeless.

Autism, however, is not a hopeless condition. It can be prevented and successfully treated without the use of drugs. This book by Bruce Fife, N.D.describes an innovative new dietary and lifestyle approach involving coconut ketone therapy that has proven very successful in reversing even some of the most severe developmental disorders, allowing once disabled children to enter regular school and lead normal, happy, productive lives. There is a solution. You can stop autism now!

Coconut Processing Units assisted by TMOC

Name of the Unit	Capacity(Nuts/day)	Products
ANDHRA PRADESH		
M/s. Sree Agro Products Pvt. Ltd., West Godavari Dist	40000	Desiccated Coconut
M/s.Sri Jayalakshmi, West Godavari	10000	Tender Coconut water
Shri. Gokavarapu Venkata Ramana Murthy, Mnachavaram Panchayath, Ambajipeta E. Godavari Dist	3000per batch	Ball copra
Sree Konaseema Coconut Food Products, Ambajipet Mandal, E.G. Dist	12000	Desiccated Coconut
Shri Appana Naga Venkateswara Rao, AVR & CO. – Copra Merchant, Ambajipetta, East Godavari	15000per batch	Ball copra
Shri. Pedamallu Venkateswara Rao, S/o. Rama Murthy, Pasarlapudilanka, Mamidikuduru Mandal,E. Godavari Dist	500000per batch	Ball copra
Sri Soubhagya Agro Foods & Minerals Pvt Ltd, Visakhapatnam	120000 shells / day	Shell powder
Shri. Maturi Narayana Murty, Rama Chandra Colony, Palakol.	500000	Ball copra
M/s.Sritara Agrotewch, Ongole	25000	Virgin Coconut Oil
M/s.Anu Coco Food Products Pvt.Ltd,Hyderabad	25000	Tender Coconut water
Smt.A Rukmini Devi, Mandal, (Via)Sivakodu	1000	Ball Copra
GOA		
M/s. Goa Coconut products	10000	Copra
GUJARAT		
Fortune Beeverages Pvt. Ltd	10000	Preserved & packed tender coconut water
JAMMU & KASHMIR		
M/s. S.S Agro Mills, Samba District	750000 shells / day	Shell Powder
KARNATAKA		
M/s. Jain Agro Foods Pvt Ltd,Mysore	10000	Preserved & packed tender coconut water
M/s. Apex Pyro Char Ltd., Vakavadi Village, Kundapur Taluk, Udippi.	900000 shells / day	Shell charcoal
M/s. Ganesh Kalpathau Industries, Kundapura Taluk, Udupi	35000	D.C. powder
M/s. Sarvashakthi Agro Products, Udupi	60000	Desiccated Coconut
M/s. Sri. Balaji Oil Industries, Uduppi	14000	Coconut oil
M/s. Swastika Coco Products Pvt. Ltd, Katbalthur Village & Post, Kundapur Taluk, Udupi	10000	Desiccated Coconut
M/s. Jain Agro Food Products Private Ltd.,Vijayanagar, Bangalore	8000	Tender Coconut water preservation and packaging unit
M/s Global Eco carbon Pvt. Ltd., Tumkur	360000 shells /day	Activated carbon

Shri. Siddheswara Coconut Industries, Siddhapura, Konchully P.O, Tiptur, Tumkur	16000	Desiccated Coconut
M/s. Vaishnavi Co-co Foods, Tumkur Dt. **(I)**	10000	Desiccated Coconut
M/s. Vaishnavi Co-Co Products, Annapura, Tiptur **(II)**	50000	Desiccated Coconut
M/s Dhanalakshmi Agro Products, Tiptur, Tumkur	10000	Desiccated Coconut
M/S. Sri Akshaya Agro Processing, Gedlehalli Village, Byranayakanahalli Post, Tiptur, Tumkur	30000	Desiccated Coconut
M/s. Siddeswara Agro Industries, Siddapura Village, Konehalli Post, Tiptur Tk, Tumkur	25000	Desiccated Coconut
M/s. Umamaheswari Industries, KN Hally, B. H. Road, Tiptur Taluk, Tumkur	16000	Desiccated Coconut
M/s. Coco Kernel Product, NH 206, BH Road, Madhihalli, Tiptur	30000	Desiccated Coconut
M/s. Dhanalakshmi Food Tech, Gedlehalli, Halkurke Road, Byranayakanahalli Post, Tiptur	40000	Desiccated Coconut Powder
M/s. Jaimatha Agro Industries, Tiptur	100000	Desiccated Coconut
M/s. Shri Vigneshwara Coconut Industries, Elimale, Sullia	10000	Copra
M/s. Coco Carbons (India) Pvt. Ltd., Nelmangala Taluk, Bangalore	75000 shells / day	Activated carbon
M/s. Panickers Coconut Industries, Bantra Village, Mardhala Post, Puttur Taluq, D.K. Dist.	10000	Virgin Coconut Oil
M/s. Sri Rama Industries, Main Road, Yelmudi, Puttur, Dakshina Kannada	10000	Coconut Oil
Cocoguru Coconut Industries Pvt. Ltd, Aryapu Village, Puttur, D. Kannada	10000	Coconut oil
KERALA		
Amrutha coconut products,Madavana, Kodungallor	10000	Desiccated coconut, vinegar, coconut chips
Chinnu products,Muttithadi, Thrissur	500	Coconut chips
Sreelakshmi coconut complex,Arattupuzha village, Thrissur	10000	Coconut Oil & edible copra
Kundoor Coconuts Pvt Ltd,Kundoor, Thrissur	2500	Coconut Oil, edible copra, coconut chips & vinegar
M/s.Essen Trading Company, Kalloor Thekumuri, Annamada, Thrissur	20000	Coconut Oil, edible copra & vinegar
Integrated Coconut Processing Unit -Karalam SCB,Thanissery Thrissur.	25000	Coconut Oil, coconut chips & vinegar
Integrated Coconut Processing Unit-Kallamkunnu, SCB,Thrissur - **I**	10000	Coconut Oil, coconut chips & vinegar
M/s. Golden Vintage Farmers Industry, Koratty, Trissur	8000	Virgin Coconut Oil (350-400 L VCO per shift)
Shri.K.B .Sivadas, Managing Director, Keramitra Coconut Oil Manufacturing Unit, Engadiyoor, Thrissur (Expansion)	10000	Roasted Coconut oil palm fiber
Kairali Virgin Coconut Oil, Thirumangalam West, Engandiyoor.P.O., Thrissur	50000	Roasted Coconut oil Vinegar
M/s. Keratech Coconut Oil Manufacturing Company (P) Ltd., 1/332 B, P.O. Engandiyur, Trichur		10000 Virgin Coconut Oil
Integrated Coconut Processing Unit-Kallamkunnu, SCB,Thrissur **- II (Expansion)**	10000	Packed, Branded Coconut Oil

M/s. Kairaly Coconut Products, Anandapuram Thrissur	5000	Coconut Oil
The Inchakundu Service Co-operative Bank Ltd., Thrissur	10000	Copra and Coconut Oil
M/s. KLF Nirmal Industries (P) Ltd. Thrissur	210000	Coconut Oil
M/s. Keramitra, Engandiyur Post, Thrissur	5000	Coconut oil
M/s. Surya Shobha, Shobha Engineering Co. Complex, Peringandoor, Athani, Thrissur	20000	Spray Dried Coconut Milk Powder
M/s. Elite Breads Pvt. LtdAthani, Velappaya PO, Thrissur.	450000shell / day	Shell charcoal
M/s. Green Indus Group, Mathilakom, Kodungallur, Thrissur.	10000nut equivalent	Vinegar
Chaithanya Food Products Pvt Ltd,Payyannur, Kannur	10000	Preserved & packed tender coconut water
M/s. Vellur Service Co-operative Bank Ltd. , Kannur Coconut	25000	Coconut Oil, Virgin Oil-Rubco & vinegar
M/s.Green Kera Enterprises, Kolachery, Kannur	6000	Coconut oil
M/s. Malabar Rubber and Agricultural Processing Co operative Society Ltd, Kannur	27500	Packed, Branded Coconut Oil, edible copra & vinegar
Thirumeni Agrl. Marketing Society, Kannur	10000	Vinegar.
Tellicheri Cooperative Marketing and Processing Society, Mattanoor, Kannur	5000	Coconut Oil
Shri. Suneshan V. K.,Sreevalsom, Thalassery, Kannur	15000	Ball copra
M/s. Monsons Extractions, Industrial Estate, Palayad, Thalassery	5000	V C O
Peekay Traders,Moothakunnam, Ernakulam	5000	Edible/milling copra
St.Antonys Foods, Vaduthala, Ernakulam	200	Coconut chips
M/s Lala Industries Pvt. Ltd, Nedumbassery	200	ice cream cup
M/s. Prakranthi Enterprises,Aduvassery South PO	2500	Coconut vinegar
M/s.Nirmal Oil Mill, Paingottoor, Kothamanagalam	1000	Coconut Oil , copra & vinegar
M/s.Active Char Products Pvt.Ltd, Maradu, Kundannoor, Cochin	1100000 shells /day	Activated carbon/day
Sevashram, Angamaly	46000	Milling copra coconut chips & vinegar
M/s. Anand Oil Mills, Thrikkalathoor, Muvattupuzha	24000	Coconut Oil
M/s. Sreya Oil Extractors, Chellanam, Ernakulam Dt.	30000	Coconut Oil
M/s. Manayampilly Flour and Oil Mills, Nedumbassery, Kaprassery.P.O.,Ernakulam	8000	Coconut Oil
M/s. Belmont Carbon and Adsorbents Pvt. Ltd., Belmont Plaza, Banerji Road, Kochi	450000shells / day	Activated carbon
M/s. Shawn D.M.E.& Associates, Chathanad, Ezhikkara.P.O. North Paravur, Ernakulam	8000	Roasted Coconut oil Venegar
M/S. Indo German Carbons Ltd, Edayar Industrial Area , Binanipuram, Ernakulam	800000 shells/day	Activated Carbon
Shri. M.V. George, Mayamprambil, T.V. Puram, Vaikom	2000	Copra
M/s. Sevashram, Mangattukara, Puliyanam.P.O., Angamaly	46000	Copra, Coconut Oil, Chips and Vinegar

M/s. Three star Industries, Kalady		Coconut wood products
M/s. Kottoor Extractions, 10th Mile, Udayamperoor, Ernakulam District	7500	Virgin Coconut Oil
M/s. GeeDee Mills, Elenthikara, Puthenvelikara, Ernakulam Dist.	7500	Coconut oil
M/s.Chandrathil Food Products, South Aduvassery, Aduvasssery, Ernakulam	10000 nuts equivalent	Vinegar
Nexus Frozen Fruits Containers & Foods Pvt. Ltd, Manickamangalam PO, Kalady, EKM	20000	Shell ice cream cup
Benzy Foods & Beverages Pvt Ltd,Ponnani, Malappuram	25000	Coconut Oil, coconut chips & vinegar
M/s. Sterling Coconut Products, Malappuram	25000	Coconut oil
The Urangattri Service Co-operative Bank, Malappuram	25000	coconut water
M/s. Vettathunadu Coconut Products, Malappuram	10000	Coconut oil
M/s. Little Flower Oil Mill and Proessing unit, Malappuram	7500	coconut oil
M/s. Rehmania Rice, Flour & Oil Mill, Cholakulam, Melattur, Malappuram	30000	Coconut oil
Mr. T.V. Thomas, Thekkekkuttu House, Vettilappara PO, Malappuram	3000	Ball copra
Jai Matha Coconut based Vinegar Industry Kottayam Dist	5000	Coconut vinegar
M/s. Jaimatha Estates, Monippally.P.O., Kottayam (Expansion)	50000nuts equivalent	coconut vinegar
Jyothi Foods Pvt. Ltd., Cherthala, Allepy	2500	Coconut Oil, coconut chips & vinegar
The Kandalloor Coconut Processing and Marketing Co-operative Society Ltd., Kayamkulam	5000	Coconut Oil
Ezupunna Panchayat SC/ST Co- operative Society, Allepy	1000	Copra and Vinegar
M/s. Sneha Oil Mill, Chandiroor, Alappuzha	5000	Agmark std.coconut oil
Kerala Malanad Karshka Produce Co-operative Marketing Society -I, Calicut	21000	Coconut Oil
Malabar Coconut Products, Onchiyam, Chombala, Badagara, Kozhikode District	5000	copra
M/s. Taj Oil Mills, Thiruvambady, Kozhikode	10000	coconut oil
The Badagara Taluk Primary Co-operative Marketing Society Ltd Kakkattil.P.O., Kozhikode	25000	Coconut Oil
Kerala Malanadu Karshaka Produce Co-operative Marketing Society -II (Expansion), Kozhikode		10000 Coconut oil
The Kozhikode Sahakarana Marketing Society Ltd. No.D.2817, Chathamangalam, Kozhikode	10000	Coconut Oil & coconut vinegar
M/s.Rare Industries, Manipuram.P.O., Muthambalam, Koduvally, Kozhikode	20000	coconut oil
M/s. Parisons Foods Pvt. Ltd, 6/1183, Cherooty Road, Calicut,	350000	Coconut Oil
M/s.Kattippara Coconut Industries, Kattippara PO, Calicut	13000	Coconut oil
Mr. P.J Thomas, Padinjarethottiyil, Kooranchundu, Kozhikode	40000	Ball copra
Shri. Hameed VS, Vellikulath House, Koorachundu, Kozhikode	15000	Ball copra
M/s. Vittal Agro Industries, D.No. KM-VIII-577, Govt. Hospital Circle, Hosdurg, Kanhangad, Kasaragod	50000	DC
The Kotachery Co-operative Marketing Society Ltd., Kasaragod.	30,000	Milling copra, Edible copra, Coconut oil.
M/s Modern Oil Mills, Palakkad - I	10000	Coconut oil

M/s. COPS, P.O., Palakkad Dist. promoted by Kanhirapuzha Grama Panchayath Farm Club, Irumbakachola P.O., Kanhirapuzha, Palakkad Dt	500	Coconut chips
Palakkad Dt. Agrl. Produces Processing and Marktg. Industrial Co-op. Society, Vandithavalam, Palakkad District.	40000	Coconut oil
M/s. Modern Oil Mills, Kozhikottiri, Ottappalam Taluk, Palakkad - **II** (Expansion)	17000	coconut oil and milling copra
M/s. Maharaja Coconut Products, Panthakkalmedu, Thenkurissi PO, Palakkad	10000	Desiccated Coconut
M/s. Pavitra Kera Products, Kundukad, Kizhakkanchery, Alathur, Palakkad	20000	Virgin Coconut Oil
M/s. AMS group, Pattambi	40000	Coconut Oil
M/s.Cheekanal Industries & Trading Company, Omalloor, Pathanamthitta (Expansion)	5000	Coconut oil
The Kulanada Agricultural Marketing & Processing Co-operative Society Ltd., Kulanada, Pathanamthitta	5000	VCO and Coconut Vinegar
M/s. Swamy Oil and Packaging Industries, Pullikada, Kollam	70000	Coconut Oil
VCO (RUBCO Technology -11 units)	22000	Virgin Coconut Oil
VCO (RUBCO Technology -6 units)	12000	Virgin Coconut Oil
MAHARASHTRA		
M/s. VSA Foods & Beverages Pvt. Ltd, Market Yard, Gultekdi, Pune	10000	Tender Coconut Water
ORISSA		
M/s. Benzfab Foods Pvt Ltd, 1/19, Saheed Nagar, Bhubaneswar	10000	Tender Coconut Water
TAMIL NADU		
Kaanaan coconut products, Kanjampuram, Kanyakumari Dist.	10000	Shell charcoal, Edible copra
Adsorbent Carbons Limited,Sipcot Industrial Complex, Tuticorin	540000 shells / day	Activated carbon
M/s.Kalpaka Chemicals Pvt.Ltd, Tuticurion	126000shells / day	Activated carbon
M/s. Adsorbents Pvt. Ltd., Tuticorin (Expansion)	450000 shells / day	Activated carbon
M/s. Raj carbon, Tuticorin	300000shells / day	Activated carbon
M/s ABI Technocherm (p)Ltd, Tuticorin	360000 shells / day	Activated carbon
M/s. Sundar Carbon, Fisheries College, Backside, Madurai Bypass Road, Tuticorin	1100000 shells / day	Activated carbon
EBE Liza Enterprises, Thootukudi Dist, Tamilnadu	135000 shells / day	Activated carbon
Sakthi coconut products,Pollachi	10000	Tender coconut water
M/s. MRT oil industries, Pollachi	70000	Copra
M/s. Super Coco Company, Pollachi	50000	Desiccated Coconut
M/s. Sharni Carbon, Kariyanchettipalayam, Pollachi	400000shells / day	Shell charcoal
M/s. Kovai Agro Foods, Meenakshipuram, Pollachi	56000	Desiccated Coconut
Vijayalakshmi Agro Industries, Avinashi, Coimbatore	60000 shells / day	Coconut shell powder
A.P.Agro Industries Coimbatore	60000shells / day	Coconut shell powder
Smt. S.Janaki, Thiru Kumaran Enterprises , Coimbatore	240000shells / day	Coconut shell charcoal

M/s. Vetham Agro Industries, Sundar Kudil, Perumal Koil Street, Ramanathapuram, Coimbatore	100000 shells / day	Shell Powder
M/s. Vigneswara Shell Charcoal,Coimbatore	5000	VCO
M/s. Genuine Shell Carb Private Limited, Erode	830000shells / day	Activated carbon
M/s. Amman Oil Mills, Kallankadu, Erode	10500	Coconut oil
M/s. SKM Animal Feeds and Foods (India) Ltd. Coconut Oil Division, Nanjaiuthukuli. P.O., Erode	1400000	Coconut oil
M/s. KCM Industries, Erode	21000	Coconut oil
M/s. Sri Lakshmi Trading Company, Salem District	120000 shells / day	Coconut shell powder
M/s. VG Tinder Products (P) Ltd, Nagar Main Road, Reddiyur, Salem	120000 shells / day	Coconut shell powder
M/s. Srinithi Agro Industries, Nallampalayam, Alathur, Salem	150000 shells / day	Coconut shell powder
M/s. Sri Raman Agro Products, Namakkal District	180000 shells / day	Coconut shell powder
M/s. Asian Industries, Bye-Pass Road Padamudipalayam, Valur PO, Namakkal	100000 shells / day	Coconut shell powder
Shri A.Saravanan, MAP Carbochems, 9/250, Nanmai Alwar Street, Kurumbalaperi, Keela Pavoor (Post), Thenkasi	120000	Coconut shell powder
M/s. Kongunad Angro Products, SF No. 1468/1, Panchapalayam Village, Olappalayam. P.O. Kangayam	60000shells / day	Coconut shell powder
M/s. S.S. Coconut Industries, Kangayam	30000	Desiccated Coconut
Priyanka Industries Sikkarasam palayam, Kangayam	100000	Coconut Oil
M/s. Sree Balaji Oil Mills, Rajaji, Kangayam, Tirpur Dist	60000	Coconut Oil
M/s. Ganga Coconut Foods, Muthur Road, Panchapalayam - PO , Pappini Village, Kangayam Tirpur Dist.	40000	Coconut Oil
Pure Tropic, Mangalam Road, Karuvampalayam, Tirupur	3000	Tender Coconut Water
M/s. KKP Industries, Nallipalayam, Padiyur Post, Kangayam Taluk, Tirupur	40000	Desiccated Coconut
RB carbon, Tirupur	900000	Shell charcoal
Samson coconut Oil Industries, Kangayam, Tiripur	350000	Coconut Oil
Maruthy Oil Industries, Kangayam, Tirupur	140000	Coconut oil
M/s. K.M.R. Industries, Chinnakannara Street, Mayiladuthurai.	10000	Desiccated Coconut
M/s. Srinivas Coconut Products, Trichy	10000	copra
M/s. Universal Carbon, Trichy, Palladam	270000shells / day	Activated carbon
Shri. Vignesh Kumar, Shell craft leader, Dindigul,	210000shells / day	Shell charcoal
M/s. Farmpact Coconut Products Pvt. Ltd., Thanjavur	15000	Virgin Coconut Oil
M/s. Ashwin Exim India Pvt. Ltd, 111 N State Bank Colony, Nataraja Nagar, Polpettai	60000 shells per day	Shell charcoal
Kajah Enterprises (P) Ltd, 64, South Car Street Tirunelveli Town	450000 shells / day	Activated carbon
UT OF LAKSHADWEEP		
Shri. Mohammed Jaleel, Moosan Kakkada Moosankakkada House, Andrott Island	10000	Copra
M/s Al-Jazeerath Industries and Trading Company	8750	Coconut oil

Coconut Situation in Southern States

Kerala

According to the statistics released by the Department of Economics and Statistics, Govt. of Kerala, the area under coconut is 770473 Ha and coconut production is 52870 lakh nuts in the year 2010-11. Compared to previous year, the area has declined by 1.05% and coconut production by 6.71 %. The state average yield of coconut has decreased to 6862 nuts per Ha. The productivity decreased by 5.72% during 2010-11.

TamilNadu

As per the statistics released by the Department of Economics and Statistics, Govt. of Tamil Nadu, the area under coconut is 410149 Ha and coconut production is 58942 lakh nuts in the year 2010-11. Compared to previous year, there is an increase in area, production and yield of coconut. The area has increased by 2.42% and coconut production by 6.26%. The average yield of coconut for the state has increased to 14371 nuts per Ha. The productivity increased 3.75% when compared to the previous year.

Andhra Pradesh

Based on the data given by the Directorate of Economics and Statistics, Govt. of Andhra Pradesh, the area under coconut cultivation in the state is 103945 Ha and coconut production is 12202.66 lakh nuts in the year 2010-11. In comparison to the last year, there has been a decrease in area and increase in production and yield. The area has decreased by 0.57% and coconut production by 6.18%. The average yield of coconut has increased to 11740 nuts per Ha. The productivity increase is 6.78% as compared to previous year.

Karnataka

According to the data given by the Directorate of Economics and Statistics, Govt. of Karnataka, the area under coconut cultivation in the state is 429860 Ha and coconut production is 30563.53 lakh nuts in the year 2009-10. When compared to the previous year, there has been an increase in area, production and yield. The area has increased by 2.69% and coconut production by 6.58%. The average yield of coconut has increased by 3.79% to 7110 nuts per Ha.

Area and Production of Coconut in Kerala

Sl. No.	Districts	2010-2011		
		Area in (Ha)	Production (Lakh nuts)	Productivity (Nuts/ Ha)
1	Kozhikode	121688	7700	6328
2	Malappuram	104178	9160	8793
3	Kannur	76917	5290	6878
4	Thrissur	75364	4930	6542
5	Thiruvananthapuram	69668	4990	7163
6	Palakkad	57094	4080	7146
7	Kasaragod	56174	4180	7441
8	Kollam	56060	3780	6743
9	Ernakulam	42894	2210	5152
10	Alappuzha	39344	2640	6710
11	Kottayam	28410	1480	5209
12	Idukki	17012	800	4703
13	Pathanamthitta	15627	1120	7167
14	Wayanad	10043	510	5078
	STATE	**770473**	**52870**	**6862**

Area and Production of Coconut in Karnataka

Sl. No.	Districts	2009-2010		
		Area in (Ha)	Production (Lakh nuts)	Productivity (Nuts/ Ha)
1	Tumkur	138660	9858.98	7110
2	Hassan	62256	4426.51	7110
3	Chitradurga	42388	2950.08	6960
4	Chikmagalur	37996	2032.39	5349
5	Mandya	25410	2550.56	10038
6	Mysore	22070	1308.99	5931
7	Udupi	16224	1301.32	8021
8	Dakshina Kannada	16096	1144.45	7110
9	Ramangara	14328	1018.75	7110
10	Davangere	12101	994.10	8215
11	Chamarajanagar	11365	808.07	7110
12	Uttar Kannada	7581	539.02	7110
13	Shimoga	6339	450.71	7110
14	Bangalore Rural	4504	320.24	7110
15	Bangalore Urban	2565	182.38	7110
16	Kodagu	1750	124.43	7110
17	Kolar	1471	104.59	7110
18	Haveri	1243	55.98	4504
19	Bellary	1039	73.87	7110
20	Chickballpur	821	58.37	7110
21	Gadag	664	47.21	7110
22	Koppal	618	43.94	7110
23	Bagalkote	614	43.66	7111
24	Gulburga	479	34.06	7111
25	Dharwad	472	33.56	7110
26	Belgaum	344	24.46	7110
27	Bijapur	268	19.06	7112
28	Raichur	175	12.44	7109
29	Bidar	19	1.35	7105
	STATE	**429860**	**30563.53**	**7110**

Area and Production of Coconut in TAMILNADU

Sl. No.	2010-2011			
	Districts	Area in (Ha)	Production (Lakh nuts)	Productivity (Nuts/ Ha)
1	Coimbatore	80712	11970	14831
2	Tirupur	49598	4086	8238
3	Thanjavur	33271	5221	15692
4	Dindigul	28284	4902	17331
5	Kanyakumari	24916	4533	18193
6	Vellore	22292	2081	9335
7	Theni	18715	3159	16880
8	Krishnagiri	15887	3217	20249
9	Tirunelveli	15621	1292	8271
10	Salem	14278	1994	13966
11	Madurai	11280	2251	19956
12	Erode	10987	1679	15282
13	Virudhunagar	9512	1082	11375
14	Ramanathapuram	8363	636	7605
15	Pudukottai	8214	1248	15194
16	Dharmapuri	7160	1421	19846
17	Namakkal	6654	1418	21310
18	Sivaganga	6599	1384	20973
19	Thiruchirappally	6397	1215	18993
20	Karur	5937	659	11100
21	Thoothukudi	5876	673	11453
22	Thiruvarur	5142	757	14722
23	Nagapattinam	4041	682	16877
24	Kancheepuram	3442	386	11214
25	Cuddalore	2230	384	17220
26	Villupuram	1948	196	10062
27	Thiruvalluar	1137	133	11697
28	Thiruvannmalai	719	106	14743
29	Perambalur	541	143	26433
30	Ariyalur	338	33	9763
31	The Nilgiris	58	1	1724
	STATE	**410149**	**58942**	**14371**

Source: Directorate of Economics &Statistics, Andhra Pradesh

Area and Production of Coconut in Andhra Pradesh

Sl. No.	2010-2011			
	Districts	Area in (Ha)	Production (Lakh nuts)	Productivity (Nuts/ Ha)
1	East Godavari	50789	6033.58	11880
2	West Godavari	20437	2927.04	14322
3	Srikakulam	14619	1475.32	10092
4	Visakapatanam	7763	692.87	8925
5	Chittoor	3837	334.44	8716
6	Vizianagaram	1909	226.43	11861
7	Krishna	1897	224.95	11858
8	Nellore	788	93.39	11851
9	Ananthapur	786	68.56	8723
10	Khamam	707	82.81	11713
11	Guntur	142	16.80	11831
12	Cuddapah	131	11.43	8723
13	Prakasam	73	8.65	11845
14	Kurnool	51	4.45	8723
15	Ranga Reddy	5	0.61	12187
16	Mahabubnagar	4	0.49	12178
17	Nizamabad	4	0.49	12178
18	Nalgonda	3	0.37	12178
19	Hyderabad	0	0.00	0
20	Medak	0	0.00	0
21	Adilabad	0	0.00	0
22	Karimnagar	0	0.00	0
23	Warangal	0	0.00	0
	STATE	**103945**	**12202.66**	**11740**

Source: Directorate of Economics &Statistics, Andhra Pradesh

Coconut ranks second in the Gross Value output of Kerala's Agricultural Economy

V G Chandrashekaran

Coconut, the largest crop cultivated in Kerala ranks second in the Gross Value Output (GVO) of agricultural crops. According to Department of Economics & Statistics, Kerala, during the year 2010-11, Kerala accounts for 7.70 lakh hectares of area under coconut cultivation, covering 37.19% of the total cultivated area of the state. Despite having large area under coconut, Gross Value Output of coconut against other crops in the state is only 13.22% during 2009-10.

Table 1 : Gross value Output of major agricultural crops in Kerala

Year	Gross value Output of Major Crops (Rs in Crores)	Gross value Output of Coconut (Rs in Crores)	% share of GVO of Coconut against other Crops
2006-07	15240.51	2558.41	16.79
2007-08	15021.99	2400.34	15.98
2008-09	17029.86	3018.88	17.73
2009-10 (provisional)	17404.49	2301.33	13.22
Growth Rate	**4.53**	**-3.47**	

A silver lining is that Kerala stands first in the production of coconut. It is disheartening to note that irrespective of largest acreage & production in coconut in the state, the GVO of coconut is in the second position after rubber. The reason for the decline of GVO of coconut is mainly due to the onslaught of rubber. In spite of having just 5.34 lakh hectares of area under cultivation rubber holds the first position in GVO in the state. During the year 2009-10, GVO of rubber was Rs.8517.15 crore which constituted 48.94% of the total GVO of the state while the GVO of coconut was only Rs.2301.33 crore constituting 13.22% though area under cultivation is over 7.70 lakh hectare.

Emerging crisis in the coconut growing sector in Kerala state is mainly due to the low productivity of coconut as well as the stagnating low market prices of coconut which compels the farmers to look for other crops that ensure better returns.

While there has been an increase in the GVO of the major crops during the year 2006-07 to 2009-10 from Rs.15240.51 crores to Rs.17404.49 crores, for coconut the GVO has shown significant decline from Rs.2558.41 crores to Rs.2301.33 crores which indicates a negative growth rate irrespective of the largest coconut acreage. This shows the adverse impact of the price fall of coconut on the income of coconut farmers. The district wise GVO of coconut in Kerala for the year 2006—07 to 2009-10 is given in Table 2.

Table2: Year wise GVO of Coconut in Kerala (Rupees in crores)

District	Years			
	2006-07	2007-08	2008-09	2009-10
Trivandrum	258.10	251.55	337.80	247.63
Kollam	272.91	205.82	291.05	223.72
Pathanamthitta	60.05	61.26	73.70	68.06
Alappuzha	168.62	151.35	173.25	140.07
Kottayam	115.36	111.44	128.62	140.07
Idukki	6.18	41.07	53.64	53.91
Ernakulam	196.48	148.77	149.15	123.38
Thrissur	259.92	243.88	274.53	220.04
Palakkad	150.61	154.08	221.85	161.80
Malappuram	304.34	308.00	453.15	369.92
Kozhikode	314.61	315.87	414.98	309.01
Wayanad	21.51	24.75	19.64	2.12
Kannur	248.60	198.75	225.50	150.89
Kasargod	181.12	183.75	201.94	152.67
STATE	**2558.41**	**2400.34**	**3018.80**	**2301.33**

Source : DES Kerala

The GVO of coconut, percentage share and its position against other crops in the districts in Kerala is evident from table - 4.

Table 3: GVO of major crops & its share

GVO of major crops in Kerala for the year 2009-10 (Provisional)		
CROP	GVO (Rs. in Crores)	%
Rubber	8517.15	48.94
Coconut	2301.33	13.22
Tapioca	1378.30	7.92
Paddy	912.69	5.24
Banana	773.36	4.44
Arecanut	648.55	3.73
Cardamom	549.66	3.73
Black Pepper	542.46	3.16
Mango	381.73	2.19
Other Plantain	308.95	1.78
Tea	268.07	1.54
Ginger	234.54	1.35
Coffee	229.93	1.32
Betel Leaves	203.19	1.17
Cashew	154.58	0.89
Total	17404.49	100.00
Source : DES Kerala		

Table 4: Districtwise GVO of Coconut in Kerala 2009-10 (Provisional)

Districts	GVO (Rs in crores)	% share of Coconut	Position of the Crop
Malappuram	369.92	26.59	2nd
Kozhikode	309.01	37.77	2nd
Trivandrum	247.63	21.43	2nd
Kollam	223.72	18.41	3rd
Thrissur	220.04	28.66	2nd
Palakkad	161.80	10.31	3rd
Kasargod	152.67	17.45	3rd
Kannur	150.89	12.32	2nd
Alappuzha	140.07	28.07	2nd
Ernakulam	123.38	8.30	2nd
Kottayam	78.11	3.31	3rd
Pathanamthitta	68.06	5.48	3rd
Idukki	53.91	2.70	6th
Wayanad	2.12	0.26	14th
STATE	**2301.33**	**13.22**	**2nd**
Source : DES Kerala			

Statistical Officer, CDB, Kochi-11

Board tie ups with Academic institutes and NGO's for producing hybrid & dwarf seedlings

In order to meet the increasing demand for coconut seedlings posed by the Replanting and Rejuvenation and the Area Expansion Programmes implemented by the Board, Board is making tie ups with academic institutions and NGOs for producing hybrid and dwarf coconut planting materials. Board is planning to replace at least 40% of the palm population with hybrid & dwarf varieties. In Kerala at present the average requirement of seedlings is estimated at about 30 lakhs annually, while the availability is scarce from Research institutions & Government agencies. In order to bridge the gap between demand and supply, Board is making tie ups with academic institutions and NGO's having professional, technical, managerial capacities and infrastructure to take up large scale production of hybrids and dwarf seedlings in the field. The project is proposed to be implemented on 50:50 basis by the Board and the concerned departments / institutions.

Board is in receipt of proposals from Assumption College, Changanassery, Catholicate College, Pathanamthitta, St.Thomas College, Pala, Sacred Heart College, Thevara, Kochi, M/s. Maithri, Palakkad and Center for Research and Development in Health Hygiene and Environment (CRDHHE), Kozhikode which are under the consideration of Board. The Institutes have commenced preliminary surveys to identify mother palms in their operational area.

Board invites management institutes to train CPSs

The Board is inviting applications from reputed management institutes having experience in entrepreneurial/ management development programmes to provide leadership training at district level to Coconut Producer's Societies registered with the Coconut Development Board. NGOs having proven experience in entrepreneurial/ management development /leadership training programmes, and having manpower resources can apply. Applications with relevant details may be submitted to the Chairman, Coconut Development Board, Kochi-682011

Tender coconut water, the dews from heaven

G.S.Unnikrishnan Nair

It is summer once again and the consumption of tender coconut has increased many fold. It was most appropriate when Honourable Finance Minister of Kerala Shri.K.M. Mani declared tender coconut as the state's official drink while presenting the annual budget. He also announced that the government proposes to promote and encourage production of value-added products from coconut and tender coconut.

The water of fresh tender coconut which is the liquid endosperm is the most nutritious wholesome beverage that nature has provided for man to fight the scorching heat and to lead a healthy life. Coconut water contains sufficient sugar making it a highly energetic drink.It's a natural isotonic beverage with the same level of electrolytic balance as we have in our blood. It's the fluid of life.

Ancient Energy Drink

For thousands of years, natural coconut water has been the energy drink of choice for warriors, hunters, gatherers, fisherman, farmers and laborers throughout the tropical world. According to ancient texts, tender coconut is the purest and the healthiest drink. It is considered the best for its cooling properties, for it is a proven pitta-pacifier. While unclogging the body's channels, tender coconut water lubricates the dryness caused by toxic matter. It repairs the gastro-intestinal tract. Charaka, the founding father of ayurveda, has observed that tender and half-mature coconuts have "bringhan, snigdha, seetani, balyani and madurani" properties. This means they increase the quantity and quality of all 7 tissues, they are vata-pacifying in nature because of their unctuous qualities, they cool and strengthen, and are filled with sweetness. Ayurveda's revered ancient healer, Sushruta, noted that tender coconuts strengthen the muscles, the cardiovascular system, increases semen and cleanse the urinary tract. Ayurveda considers coconut as a natural stress-buster also. Coconut cools a sub-energy called sadhaka pitta, which is associated with emotions. Coconut water has been used in folk medicine from time immemorial - particularly as a 'brew' made by the addition of a proportionate quantity of powdered 'Kadukka' (myrobalan) nuts to its water and used as a laxative.

Wholesome Drink

Tender coconut is a highly nutritious drink. You can have this refreshing beverage instead of

sugar and calorie laden aerated drinks and fruit juices. It is naturally sterile and so perfect for drinking while traveling, without the fear of contamination. In fact, the tender coconut water contains many of the same nutrients as breast milk including lauric acid and is suitable for weaning babies as a medicine for their digestive irritations. Lauric acid boosts the body's immune system and is a natural antibacterial.

Sugars in the form of glucose and fructose form an important constituent of the tender nut water. The concentration of sugars in the nut water steadily increases from about 1.5 per cent to about 5 - 5.5 per cent in the early months of maturation and then slowly falls reaching about 2 per cent at the stage of the full maturity of the nut. Tender coconut water contains most of the minerals such as potassium, sodium, calcium, phosphorous, iron, copper, sulphur and chlorides. Coconut water contains small amounts of protein also. The percentage of arginine, alanine, cystine and serene in the protein of tender coconut water are higher than those in cow's milk. Tender coconut water contains both ascorbic acid and vitamins of B group. The concentration of ascorbic acid ranges from 2.2 to 3.7mg per ml, which gradually diminishes as the kernel surrounding the water begins to harden.

Coconut water is composed of many naturally occurring bioactive enzymes such as acid phosphatase, catalase, dehydrogenase, diastase, peroxidase, RNA polymerases etc. Altogether, these enzymes aid in digestion and metabolism. Some of the most interesting components of coconut water are the plant growth hormones, particularly cytokinins. Cytokinins are a group of hormones that regulate growth, development, and aging in plants. Cytokinins also have an anti-aging effect on human cells and tissues.

Nature's water therapy

Coconut water is a very refreshing drink to beat tropical summer thirst. The juice is packed with simple sugar, electrolytes and minerals to replenish hydration levels in the body. A burning sensation in hands and feet is cooled down by drinking coconut water. Hiccups due to heat imbalance are also eased by coconut water. If you have urine retention from heat, then coconut water helps. Tender coconut water mixed with orange juice, kathali variety of banana or ginger extract are good remedies for scarce urination. Similarly, liver problems, hepatitis or inflammation are also soothed by drinking tender coconut water. For jaundice, tender coconut water mixed with pounded tender mango leaves is a home remedy. It can be applied directly on the skin to cool sunburn and prickly heat and is also squirted into the eye to help with infections. Coconut water helps maintain our mental concentration and aids in the prevention of headache by keeping the body's natural fluid levels maintained and the body properly hydrated. It also helps in carrying nutrients and oxygen to cells.

Coconut Sports Drink

Players in the world's $1,000 million market for "sports beverages" is facing an unexpected new competitor, coconut water. FAO has taken out its first ever patent on a new process that would allow manufacturers to bottle coconut water that is biologically pure, very tasty and full of the salts, sugars and vitamins demanded by both sweating urban joggers and serious athletes. The process was invented by Morton Satin, Chief of AG's Agricultural Industries and Post-harvest Management Service.

Miracle food processors, a Perinthalmanna based Company as a joint venture with Winter Umwlttechnik, Germany is launching tender coconut based sports drink in the market. Miracle Food Processors is already marketing tender coconut cola.

Coconut water has been generally offered to patients with diarrhea in many tropic regions to replace fluid loss from the gastrointestinal tract and reduce the need for intravenous therapy. Tender coconut water has been also used intravenously to treat diarrhea. The osmolarity of tender coconut water is slightly greater than that of WHO recommended ORS (Oral Rehydration Salt). Currently it is used around the world to save lives, particularly in the treatment of cholera. As cholera devastates many areas of the world, coconut water consumption increases the survival rate of its victims by as much as 97 percent. In fevers like measles and chicken pox, the patient feels very weak. Tender coconut water provides electrolytes and is thus refreshing to them. It also helps to keep the skin from itching and helps to subside the effects of rashes caused by chicken pox, hives, measles, small pox, mosquito and insect bites.

Coconut water helps relieve constipation, improves intestinal function and promotes digestive health. Drinking tender coconut water of Gourigathra variety mixed with water and boiled till orange in color, is a good remedy for constipation. It is often recommended to people suffering from acidity and ulcers. Sluggish digestion and heartburn during pregnancy can be controlled to some extent by drinking coconut water. Coconut water provides a laxative effect and so is a useful colon cleanser which has shown to kill intestinal worms.

Global Scenario

Tender coconut water is a popular refreshing beverage widely consumed in tropical countries, commonly sold fresh by street vendors. Euro monitor International's soft drinks data shows that Brazil is currently the world's largest market for packaged coconut water. Coconut water accounted for 67% of 100% juice retail volume sales in 2010, compared to 47% in 2005 and 21% in 2003. This rapid share gain came primarily at the expense of orange juice. Today the demand for tender coconut water in the global market is around 100 million litres.

The packaged 'elaneer' or tender coconut water industry has been growing at 25% every year in India. The Coconut Development Board in collaboration with Defense Food Research Laboratory, Mysore has developed the technology for packing tender coconut water in pouches/ aluminum cans with shelf life of more than six months under normal ambience condition and 12 months under refrigerated condition. According to the Board, about half a dozen units in India availed this technology. Many recipes has been developed using tender coconut water and its endosperm including Coconut Lessi, Elaneer Pudding and Coconut Halwa. Snow ball tender nut is a tender coconut without husk, shell and testa which is ball shaped and white in color.

Coconut also helps to detoxify the body. With all its cleansing properties, coconut water is also incredibly useful for periods of fasting, urinary tract infections as well as for reducing the incidence of kidney stones. Dr. Eugenio Macalalag, director of the urology department of the Chinese General Hospital in the Philippines, says that coconut water has demonstrated its effectiveness in patients suffering from kidney and urethral stones. He reports that consuming coconut water 2 to 3 times a week results in a significant reduction in stone size and expulsion, eliminating the need for surgery. Coconut water also has an alkalizing effect on the body which helps to counter balance the effects of acidifying foods.

Since coconut water improves blood circulation, it is of benefit to Diabetics. One of the characteristics of diabetes is poor blood circulation and a tendency to develop atherosclerosis. Many of the complications associated with diabetes, such as numbness in the feet, loss of vision and kidney failure are consequences of poor blood circulation. Coconut water helps dilate blood vessels, improves blood flow, and reduces plaque formation thus helping to relieve these symptoms. Coconut water also contains certain forms of dietary fiber and amino acids that help moderate sugar absorption and improve insulin sensitivity.

Drinking coconut water regularly enhances sexual virility, boost energy levels and fortify the immune system. Coconut water increases libido, breast milk production, and restore male sexual fluids.

It contains a good amount of potassium. Potassium regulates cardiac function and hypertension. It helps in increasing good cholesterol levels (HDL) in the body. In Jamaica coconut water is known as a heart tonic and is used to strengthen the heart and improve circulation. Animal studies show that coconut water consumption improves the ratio of good cholesterol to bad and reduces plaque formation in arteries, thus reducing risk of heart attack and stroke.

Tender coconut water helps to prevent osteoporosis, bacterial, viral and fungal infections, naturally replenish body's fluids after exercise and cures malnourishment. Coconut water also promotes bowel movements, healthy thyroid function and eliminates yeast infection. It eradicates eczema, gallbladder disease; prevent premature aging and wrinkling of the skin, skin blemishes, sun tan, skin dehydration, dandruff, dry and chapped skin and relieves stress on pancreas and enzyme systems of the body. Rice fermented in TCW is made into an ointment and applied to cure foot rashes.

Despite the increasing demand for tender coconut water in the international market, India could not exploit its maximum potential due to the absence of large-scale tender coconut processing units. The export revenue through export of tender coconut water was only Rs 1.25 million in 2010-11.On the other hand, tender coconut water continues to grow as India's bestseller health drink.

The demand for tender coconut water is spiraling rapidly in the world as people are realizing the health benefits it truly offers. This low calorie juice does not have the presence of unhealthy artificial sweetening agents which cause health problems and dehydrate the body. Do you know that the Hawaiians refer to coconut water as noelani, which means 'dews from the heavens'... and indeed, as you learn more about the benefits of coconut water, you will truly understand why they say so!

Asst Director of Agriculture/Farm Seperintendent, Seed Garden Complex, Munderi, Malappuram, Kerala, vanchiyurunni@gmail.com

Gourigathra - the Sweetest

Tender coconut water is no doubt delicious, nutritious and wholesome. But which is the best variety for yielding tasty coconut water? Scientists of Coconut Research Station at Veppankulam near Pattukottai in Thanjavur district have the answer. According to scientists of the research station, among various coconut varieties, Chowghat Orange Dwarf variety (Gourigathra) is considered the best. They arrived at this result based on various tests conducted by them. Chowghat Orange Dwarf from Kerala gives 300 to 350 ml of tender coconut water. The round nuts are orange in color. The trees flower in 3.5 years and bear nuts in 4.5 years. They bear 100 nuts per annum. Nuts are plucked in six to seven months for their tender water purpose. Other varieties like Malaysian Yellow Dwarf, Malaysian Orange Dwarf and Malaysian Green Dwarf are good for tender coconut water, but are only next to Chowghat Orange Dwarf.

Opportunities available for CPSs

Formation of the farmer's consortium under the Coconut Producer's Society (CPS) was a novel idea of the Board during 2011. The movement is gaining momentum now. As against the target of forming 1000 CPS in the financial year of 2011-12,more than 1160 CPS are formed now. The objective of the Board is to ensure better price realisation to the farmer for his produce, exposure to best practices, high quality farm inputs at competitive rates and market access for his products. In order to promote and encourage the CPSs, Coconut Development Board is offering plenty of opportunities to its members. Board will give preference to the CPS in the implementation of its various schemes.

Kissan Credit Card, providing need based credit support to the farmers

The Kissan Credit Card is a pioneering credit delivery innovation for providing adequate and timely credit to farmers under a single window, with flexible and simplified procedure, adopting whole farm approach, including the short-term credit, medium term and long term credit needs of the borrowers for agriculture and allied activities and a reasonable component for consumption needs. As the pioneering credit delivery innovation, Kissan Credit Card scheme aims at provision of adequate and timely credit support from the banking system to the farmers for their cultivation needs including purchase of inputs in a flexible and cost effective manner.

Basically this revolving credit facility is provided to meet the short term recurring expenses of the farmers and after every harvest they are supposed to remit the money to the account. At least once in a year the account has to be brought back to credit balance. In case of the farmer keeping credit balance, the bank will pay interest on that to them.

The quantum of finance is determined by the scale of finance approved by District Level Technical Committee on yearly basis. Credit facilities up to Rs.1.00 lakh is extended with out guarantee or collateral security. KCC up to Rs.3.00 lakhs availed from Public sector Banks, Grameen Banks and Co-operative Banks are eligible for interest subvention of 2% and if repaid in time, additional 3% as interest subsidy. KCC up to Rs.3.00 lakhs, if repaid in time, will have only 4% interest.

Advantages of Kissan Credit Card

- All eligible farmers could make use of Kissan Credit Card.
- Credit requirements of the borrower for the whole year are taken care of.
- Minimum paper work and simplified documentation procedure for drawal of funds from the Bank.
- Flexibility to draw cash and buy inputs from source of their choice.
- Reduced interest burden to farmers/eligible to get interest at Savings Bank rate for the credit balance maintained subject to norms applicable to SB accounts.
- Sanction of the facility for 3 years subject to annual review/satisfactory operations with provision for enhancement.
- Adequate and timely credit support to farmers.
- Flexibility of drawing cash also from a branch other than the issuing branch, subject to discretion by the Bank.
- At present banks are issuing ATM enabled KCC to farmers which will facilitate them to draw cash from ATMs and make payments for the inputs they are purchasing.

Interested CPSs can approach the local bank for further details.

Coconut Nursery: CPSs can initiate the procedures for establishing coconut nurseries. Board is planning to produce one lakh coconut seedlings through the CPSs during this year. With the objective of enhancing the production and supply of good quality planting materials Board is extending financial assistance to coconut nurseries. The financial assistance is limited

to 25% of the cost of production or Rs.2 lakhs whichever is less. The minimum financial assistance of Rs.50000 is allotted for producing 6250 seedlings annually from 25 cents and maximum financial assistance of Rs.2 lakhs for producing 25000 seedlings from one acre. Board is also planning to collect and distribute 1000-2000 dwarf seednuts to each CPS. Interested CPSs can approach the Board for further details.

Laying out of Demonstration Plot: Board is implementing the LODP programme with the objective of increasing the production and productivity of coconut from unit holdings by proper and timely adoption of package of practices in a farmer participatory mode. This programme will facilitate the adoption of appropriate coconut based farming systems and promote farm level processing for value addition on a community basis. Those CPS which are having more than 4000 yielding coconut trees under its operational area can approach the Board. The scheme is presently implemented in all the districts in Kerala. As the replanting and rejuvenation programme is being implemented in Thiruvanathapuram, Kollam and Thrissur districts, these districts are exempted from the scheme

Tender Coconut Retail Outlet: Coconut Development Board is extending support for the establishment of retail tender coconut parlours for Coconut Producer's Societies registered with CDB. The support will be on a project basis. The interested Coconut Producer's societies will have to submit a detailed project to the Board. Board will provide reimbursement of 50% of the cost incurred limited to a maximum of Rs.1.50 lakhs for the physical structure and installation of the outlet. The Board will also extend assistance to the tune of 50% for expenses related to the purchase of utensils and other infrastructure facilities.

Modern Copra dryer: With the objective of encouraging the production of best quality copra, Coconut Development Board is extending financial assistance for the procurement of modern copra dryers. Interested CPSs can approach the Board for further details. Board will provide 25% subsidy upto a maximum of Rs.10,000 for purchasing the dryer. Application form for the financial assistance for copra dryers can be downloaded from the website of the Board.

New order of the Government of Kerala: Government of Kerala has issued the order enabling the members of the Coconut Producers Societies to supply copra to the designated procuring agencies without the certificate of the concerned Agriculture Officer. This would enable the members of the CPSs to enjoy the advantages of the MSP without much hurdles.

Certification course in hybridization techniques

Coconut Development Board is organizing one month certification course in hybridization techniques at the Demonstration Cum Seed Production Farms at Mandya in Karnataka, Neriamangalam in Kerala and Pitapally in Orissa. Those who are aged between 18-40 and are having educational qualification of plus 2 with biology as main subject or vocational higher secondary with either biology or agriculture as main subject can apply. Accommodation for the participants is free. They will be provided a stipend of Rs150/- during the training period. Those who are interested may please apply with their bio-data. For more information please contact: **Shri. Mukund Kumar Singh, Farm Manager**, DSP Farm, Coconut Development Board, Pura Village, Loksara P.O.,Mandya District, Karnataka - 571 403.Ph: (08232) 234059, Email: dspfarmmandya @gmail.com, Mob: 095381 75445, **Shri. Sardar Singh Choyal, Assistant Director,** DSP Farm, Coconut Development Board, Neriamangalam, Kerala, Pin-686 693, Ph: (0485) 2554240, Email: cdbnrlm@ yahoo.in, Mob: 09446366099. **Shri. B. Chinnaraj, Senior Technical Officer,** DSP Farm, Coconut Development Board, Pitapally, Post Kumarbasta, District Khurda - 752055, Orissa.,Ph: (0674) 2111505, E-mail: cdbbbs@ ori.nic.in, Mob: 09438152872

Coconut Miracles

Coconut and coconut oil has always been the subject of controversy. A disturbing trend is the malicious propaganda and negative publicity against coconut linking its consumption with coronary heart disease in human being. Many studies are now proving the beneficial effects of the medium chain fatty acids in coconut oil. Now coconut oil rich diet is advocated even by doctors against preventing diabetes, thyroids, Alzheimer's disease and even autism.

How Coconut Oil Can Help Alzheimer Patients

Study from the European Journal of Internal Medicine notes that Alzheimer's, Parkinson's disease, and amyotrophic lateral sclerosis (ALS) all have an association with mitochondrial dysfunction. A study published in 2010 showed that a diet enriched in the saturated fatty acids of coconut oil offered strong advantages for the protection against oxidative stress in heart mitochondria. Another major advantage the saturated fat of coconut oil provides is its ability to provide the brain with an alternate source of energy in ketones. Ketones are high energy fuels that nourish the brain. Our body can produce ketones from stored fat while fasting or in starvation, but they can also be produced by converting medium chain fatty acids in certain foods. Coconut oil is nature's richest source of these medium chain triglycerides (MCTs). A study done in 2004 took MCTs from coconut oil and put them into a drink that was given to Alzheimer's patients while a control group took a placebo. They observed significant increases in levels of the ketone body beta-hydroxybutyrate (beta-OHB) 90 minutes after treatment when cognitive tests were administered.

As coconut oil's use becomes more accepted and widespread, and as people begin to realize the dangers of the low-fat dietary belief, more testimonies are appearing in diseases like Alzheimer's. One of the most widely published reports is from Dr. Mary Newport as reported by the St. Petersburg Times. Dr. Newport's husband had been diagnosed with early onset of Alzheimer's . After using drugs that slowed down the effects of Alzheimer's, she looked into clinical drug trials and found one based on MCTs that not only slowed the progression of Alzheimer's, but offered improvement. Not being able to get her husband into one of these trials, she began to give him Virgin Coconut Oil, and saw incredible improvement in his condition.

He began taking coconut oil every day, and by the fifth day, there was a tremendous improvement. "He faced the day bubbly, more like his old self. More than five months later, his tremors subsided, the visual disturbances that prevented him from reading disappeared, and he became more social and interested in those around him.

(Source: http://healthimpactnews.com)

Coconut Oil and Diabetes

Coconut oil's ability to control hunger and cravings is well documented. Coconut oil's medium chain fatty acids promote thermogenesis and lead to increased metabolic rates. Population studies of societies that consume much of their calories from the saturated fats of coconut oil show that diabetes is very rare. A study done in India in 1998 showed that when Indians abandoned traditional fats like ghee and coconut oil, and started using polyunsaturated fats like sunflower or safflower oils, the rates of diabetes became alarmingly high. Studies carried out in South Pacific Island countries have revealed the same thing. When the traditional diet high in coconut oil is abandoned in favor of more modern foods that are highly processed, including polyunsaturated vegetable oils, there is a direct increase in the rate of diabetes and other western diseases.

A study done in 2009 at the Garvan Institute of Medical Research in Australia by Dr. Nigel Turner and Associate Professor Jiming Ye demonstrated that a diet rich in coconut oil protects against 'insulin resistance in muscle and fat. A diet rich in coconut oil,

which is high in medium chain fatty acids, also avoids the accumulation of body fat caused by other high fat diets of longer chain fatty acids of similar calorie content. These findings are important because obesity and insulin resistance are major factors leading to the development of Type 2 diabetes.

A study was conducted in 2010 to study the effect of saturated fatty acid (SFA)-rich dietary vegetable oils on the lipid profile, endogenous antioxidant enzymes and glucose tolerance in type 2 diabetic rats. The study concluded that the type of fatty acid in the dietary oil determines its deleterious or beneficial effects. Lauric acid present in coconut oil may protect against diabetes-induced dyslipidemia.

(Source: http://coconutoil.com)

Coconut Oil: A Healthy Choice for the Thyroid

Coconut oil is a saturated fat made up primarily of medium chain fatty acids. Also known as medium chain triglycerides (MCTs), medium chain fatty acids are known to increase metabolism and promote weight loss. Coconut oil can also raise basal body temperatures while increasing metabolism. This is good news for people who suffer with low thyroid function.

Coconut Oil and Oxidative Stress

One of the reasons the long chain fatty acids in vegetable oils are so damaging to the thyroid is that they oxidize quickly and become rancid. Food manufacturers know about this propensity towards rancidity and, therefore, highly refine their vegetable oils. Research has shown that trans fatty acids, present when vegetable oils are highly refined (hydrogenated or partially hydrogenated), are especially damaging to cell tissue and can have a negative effect on the thyroid as well as health in general. Because the longer chain fatty acids are deposited in cells more often as rancid and oxidizing fat, impairment of the conversion of thyroid hormone T4 to T3 occurs, which is symptomatic of hypothyroidism.

Because coconut oil is saturated and very stable, the body is not burdened with oxidative stress as it is with the vegetable oils. Coconut oil does not require the enzyme stress that vegetable oils do, preventing T4 to T3 hormone conversion, not only because it is a stable oil, but also because it is processed differently in the body and does not need to be broken down by enzyme dependent processes as do long chain fatty acids. Also, since the liver is the main place where damage occurs from oxidized and rancid oils that cause cell membrane damage, and since the liver is where much of the conversion of T4 to T3 takes place, eliminating long chain fatty acids from the diet and replacing them with medium chain fatty acids found in coconut oil can, in time, help in rebuilding cell membranes and increasing enzyme production that will assist in promoting the conversion of T4 to T3 hormones.

(Source: http://healthimpactnews.com)

Autism Reversed with Virgin Coconut Oil

Autism is a developmental disability that affects how the brain functions, especially in those areas of the brain that control social ability and communication skills. Boys are most likely to develop autism, and most children are diagnosed before the age of three.

Rosemarie Rosale live in Lapu-Lapu City, Cebu in Philippines. Her son Homer Ponce Rosales was diagnosed with autism spectrum disorder (ASD). Despite behavioral therapy, Homer showed little progress. Then she took him to a special school where she was introduced to a gluten-free and casein-free diet for the child. This approach was supported by studies that demonstrated that certain foods seem to affect the developing brains of some children with autism.

At the age of four, Homer began his special school and his new diet. After following the gluten-free and casein-free diet for almost 10 months, his behavior improved, he became more manageable, he began to socialize with other kids, could read and write a little, and talk a little. She came to know how coconut oil could be used to strengthen the immune system, prevent illness, and improve health. She started giving coconut oil to him every day and sometimes three times a day. After two months, a dramatic improvement in his behaviour especially in his speech was noticed.

Autistic children often never learn to speak and when they do, they have limited communication skills but Homer was learning to speak two languages. Homer is now 7 years old. He can read very well and write clearly. He is attending regular classes at a private school.

(Source: http://www.coconutresearchcenter.com)

For more information visit the website of the Board www.coconutboard.nic.in

CARe KERALAM

CARe KERALAM Ltd is a Special Purpose Vehicle (SPV) for setting up a centralized infrastructure for standardized manufacture of ayurvedic medicines and services to the cluster of ayurvedic companies in the State. The common facilities include raw material distribution, quality control laboratory, R&D division and media centre for branding of Kerala Ayurveda. The company will also work on documentation of various ayurvedic products. This innovative project, sponsored by the Department of AYUSH, Government of India, under the scheme for development of AYUSH clusters, is established on two hectares of land in KINFRA Park, Koratty, Thrissur District in Kerala.

Facilities offered by CARe KERALAM Ltd

The small and medium scale industries engaged in the manufacture of ayurvedic medicines do not have enough resources to upgrade the quality of their products. KINFRA's cognizance of this fact and timely intervention led to the establishment of the present project, the first of its kind in the country, thus making it possible to set up R&D and quality control laboratories for the benefit of a cluster of ayurvedic,herbal drug, health food manufacturers and service providers.

The facilities include a full-fledged quality control and R and D laboratory for herbal and ayurvedic products. These consist of QC and R and D laboratories, toxicology study centre, process validation lab for scale-up operations, a raw material warehouse with mini lab, IT and marketing infrastructure, a common facility centre for production and packaging, as well as a nursery for herbs.

The Analytical Lab is a well-equipped laboratory with all modern facilities for analytical testing, method development and contract research will provide reliable, dependable, economical and rapid analysis of samples submitted by entrepreneurs.

The Toxicology Study Centre keep the studies in this centre in accordance with traditional use and modern standards. The studies will be on direct toxic effects, allergic reactions and other side-effects, effects from contaminants and or interactions with drugs and other herbs. The benefit-risk ratio of herbal drugs will also be addressed. An animal house with high standards of hygiene and husbandry conditions forms part of this centre.

The Process Validation Lab offer laboratory facilities for R and D to small and medium enterprises for innovation. Facilities are also available for scaling up of various processes developed through process validation. The process validation lab has all the state-of-the-art equipments required for carrying out the necessary scale-up activities.

Raw Material Store and Mini Lab attached to the warehouse will ascertain the quality of the raw materials procured.

IT and Marketing Infrastructure the first of its kind in the country, will have a database on the long and vibrant history of Ayurveda and exhibits illustrating the history of Ayurveda. The database will depict the origin, development, and application of traditional Ayurveda and its role in the history of medicine. It will serve as an excellent education tool to the lay public on healthy living.

Common Facility Centre for Production and Packaging is equipped with state-of-the-art equipments to carry out testing and certification, measurement, quality and safety certification and certain key processes, which are not affordable to small manufacturers. The common facility centre can be used by entrepreneurs to manufacture high quality products that meet international standards of hygiene, product specification and quality.

Government of India, through the Cluster Development programme of Department of AYUSH, granted Rs. 10 Crores for this project. CARe KERALAM Ltd. has 110 share holders as members. CARe KERALAM Ltd keeps its door wide opened to the Ayurveda industry of Kerala.

For more details contact: Karimpuzha Raman, Managing Director, CARe KERALAM, E.mail: md@carekeralam.com

CDB participates in the review meeting convened by Chief Minister, Kerala

A view of the review meeting

Shri.Ommen Chandy, Honorable Chief Minister, Kerala convened a meeting to review the status of value addition and marketing of coconut products at the Government Secretariate, Thiruvananthapuram on 18th April 2012. Shri. K M Mani, Minister for Finance, Shri. K P Mohanan, Minister for Agriculture and Shri. P J Joseph, Minister for Irrigation Kerala were present on the occasion. Shri. T.K. Jose, IAS, Chairman, CDB made a presentation on the scope for value addition in coconut and suggested the way forward in promoting coconut processing industries through Coconut Producer's Federation and Companies. Meeting took decision for the speedy execution of the declarations made for coconut sector in the state budget. Smt. Rani George, Special Secretary, Department of Coir, officers of the Coconut Development Board, officials and farmers attended the meeting.

MLAs visited the Board

T.A.Ahmed Kabeer, M.L.A , Mankada, Malapuram district and Shri.V.D. Satheeshan, MLA, North Paravoor, Ernakulam district Kerala visited the Coconut Development Board on 2nd April 2012 and 12th April 2012 respectively. Both the MLAs held discussion with Shri.T.K. Jose IAS, Chairman and Senior Officers of the Board on the prospects of introducing integrated coconut development programmes in their constituency. Chairman offered all possible help for the formation of the Coconut Producer's Societies for making available the service of the Friends of Coconut Tree and in all coconut related developmental activities.

Shri. T.A. Ahmed Kabeer, MLA having discussion with Shri. T.K. Jose IAS.

Shri. V.D. Satheeshan, MLA having discussion with Shri. T.K. Jose IAS.

Tender coconut parlour opened at Thrissur and Kochi

Tender Coconut Parlours at the initiative of the Coconut Development Board are opened at Civil station, Thrissur and at the Vytilla Mobility Hub,Kochi. Shri.P.M Francis IAS, District Collector inaugurated the tender coconut parlour at Thrissur on 26th March 2012 and Dr. M Beena IAS, Managing Director, Vytilla Mobility Hub inaugurated the tender coconut parlour at Kochi on 23rd April 2012. Shri. T K Jose IAS, Chairman, Coconut Development Board was present on the occasion. Pappanchalla Coconut Producers Society is running the coconut parlour at both the centers. Since tender coconut water is declared as the official drink of Kerala, Board is concentrating on the promotion of tender coconut water. It is expected that this would increase the livelihood potential of the coconut farmers and would also encourage the usage of this nutritious, thirst quenching health drink at a reasonable price. Board is planning to establish more tender coconut parlours at the initiative of the Coconut Producer Societies across the country in Railway Stations, major tourist centers and on the main road sides.

Dr. M. Beena IAS inaugurating the tender coconut parlour at Vyttila mobility hub. Shri. T.K. Jose IAS is seen

Coconut industrial park in Kuttiyadi

The Kerala State Industrial Development Corporation (KSIDC) is setting up a coconut industrial park at Kuttiadi, near Kozhikode in Kerala. Park is set up in 131 acres of land in the Manimala Estate in Velom Panchayath near Kuttiyadi town. A common facility centre, power sub-station, water supply points and other infrastructure will come up on 16 acres of the park. A coconut based industrial complex including a coconut wood based power project is also proposed. The balance 110 acres of the park project will be leased out to private entrepreneurs for setting up units for manufacturing coconut-based value-added products. The Kuttiyadi Coconut Park Ltd., a special purpose vehicle is formed with 50% equity participation by State Govternment, KSIDC and the balance by private investors. The park will promote units which use state-of-the-art technology to make products. It will also ensure farmers a ready market for their products and help the government form long-term strategies for the development of the coconut sector. Coconut Development Board (CDB) would extend financial assistance under the Technology Mission on Coconut programme.

FoCT training held at Regional Fruit Research Station, Maharastra

Coconut Development Board, State Centre, Thane in association with Dr. Balasaheb Sawant Konkan Agriculture University, Dapoli and Mahila Kathya Kamgar Audyogic Sastha Vengurle conducted FoCT training programme from 16th to 21st March 2012 at Regional Fruit Research Sattion, Vengurle. Adv. Vijaykumar Kolte, Vice Chairman, Agriculture Education and Research Parishad, Pune inaugurated the training programme. Shri. V V Limaye, Member, Coconut Development Board was present on the occasion. 20 trainees attended the training. Shri. M. Thomas Mathew, Chief Coconut Development Officer, Coconut Development Board was the chief guest of the valedictory function. He distributed prizes and certificates to the winners of the various competitions held as part of the training. Shri.V V Limaye, Board member presided over.

FoCT and CPSs cross the target

Friends of Coconut Tree programme of the Board crossed its target of training 5000 youths. More than 5600 persons are now successfully trained by the Board in palm climbing, harvesting and other plant protection operations. More than 75% of the trainees have taken up this as their profession and is making a decent living from this job. During next year, Board is planning to give training to 1000 persons each from all the major coconut producing districts in Kerala. Trainees will be identified from the Coconut Producer's Societies from the respective districts. Board is also planning to give training to 5000 persons from Tamil Nadu, Karnataka, Andhra Pradesh, Goa, Maharastra, Lakshadweep and Andaman and Nicobar Islands.

Coconut Development Board's initiative to unite the small , marginal and fragmented coconut farmers under the Coconut Producers Societies (CPS) have crossed the target of forming 1000 CPSs in 2011-12. 1500 CPSs have been formed as on 31st March 2012 and 1158 CPSs are registered with the Board. A CPS is formed when farmers from a particular area form a group to undertake the activities of farming, processing and selling together. The CPS will get priority for getting the financial and technical assistance of the Board.

ABARD Ilaneer

Elaneer kool, the filtered and pasteurized natural tender coconut water, manufactured by Vadayil industries Attingal, Thiruvanathapuram with the help of Kerala Agricultural University's Agro Bio Agency for Rural Employment Development (ABARD) technology is getting good response from the market. Vinod Kumar, the proprietor of the firm admits that even though it was difficult to establish a market, the product has fetched good demand now. He is processing nearly 600 coconuts daily. Initially tender coconut was collected from the nearby premises, but now he is collecting tender coconut from Palakkad. The product is having a shorter shelf life as no preservatives are added to the product. He

is marketing the products in hotels, super markets, resorts and hospitals.

Shri. Baiju, a resident of Vaikom in Kottayam district in Kerala is running three units of tender coconut water developed with the ABARD technology. The product is sold in bottles after filtration and pasteurization.

North East Connect Conference

Coconut Development Board, State Centre, Kolkata participated in the North East Connect Conference on 2nd and 3rd March 2012 held at new town Kolkata. Shri. C M Bachhawat IAS, Commissioner and Secretary Agriculture, Government of Meghalaya inaugurated the programme. Board displayed coconut products, by products, handicrafts and informative posters. Officials of the Board briefed the visitors on the schemes of the Board and coconut cultivation practices. Board's stall received the memento for the best decorated stall.

Kisan Mela

Coconut Development Board, State center, Kolkotta participated in Kisan Mela held on 27th March 2012 at CPCRI campus Mohitnagar, West Bengal. Shri. Narayanan Samanta, Additional Director of Agriculture, West Bengal inaugurated Kisan Mela. A seminar was also held as part of the mela. Shri. B M Jairam, Deputy Director, Spices Board, Gangtok, Shri. N C Bhawal, AGM, NABARD, Dr. R Dhanapal, Principal Scientist, CPCRI, Kasaragod and Dr. Arun Kumar, Scientist in Charge, CPCRI, Mohit Nagar attended the mela and seminar.

45th Cocotech Session will be held at Kochi, Kerala

The venue of the 45th Cocotech Session is changed to Kochi, Kerala. The Session and Coconut Festival will be held from 2nd to 6th July 2012.

Horticulture Expo 2012

Coconut Development Board, State Center, Hyderabad participated in 22nd Horticulture Expo at People's Plaza, Necklace Road, Hyderabad from 26th to 30th of January 2012 organized by the Department of Horticulture, Government of Andhra Pradesh in connection with 63rd Republic Day Celebrations.

The Expo and the CDB stall was inaugurated by Shri N. Kiran Kumar Reddy, Chief Minister, Andhra Pradesh. Shri. Ramreddy Venkata Reddy, Minister for Horticulture, Sericulture & RSAD, Shri Mukesh Goud M., Minister for Marketing and Warehousing, Dr.C.V.S.K. Sarma, IAS, APC & Principal Secretary to Horticulture & Sericulture and Smt. I. Rani Kumudini, IAS, Commissioner of Horticulture, Govt. of Andhra Pradesh were present on the occasion.

The objective of the Expo was to provide holistic growth in horticulture through research, technology promotion, extension, processing and marketing and also to create awareness on various new technologies and advanced practices on pre and post harvest management of various horticulture crops.

Shri Shailendra Kumar, IAS, Director (Hort) in the Board's stall. Shri K.R. Kuttikrishnan, Deputy Director is seen.

The Board's stall showcased various tender coconut bunches, coconut based food & beverage products, handicrafts made of wood, shell, husk etc. Technical charts, posters on value added products and Board's publications were also displayed. M/s.Anu Coco Products (P) Ltd., Hyderabad, M/s.Sri Tara Agro Tech, Ongole, M/s. Sree Agro Products (P) Ltd., Tanuku and artisans from Kerala and Karnataka displayed their products in the Board's stall.

Rural Crafts cum Technology Mela 2012

Coconut Development Board participated in Rural Crafts-cum-Technology Mela held at Rural Technology Park, National Institute of Rural Development (NIRD), Rajendra Nagar, Hyderabad from 25th to 28th February 2012 organized by NIRD. Dr. M.V. Rao, IAS, Director General,NIRD inaugurated the mela. Shri J.A.C.S. Rao, IFS, Project Director, Rural Technology Park and other senior officers from NIRD were present on the occasion. The objective of the Mela was to showcase various rural technologies which were developed by different organizations that are useful for the rural poor to improve their standard of living. The Board's stall showcased different coconut based food & beverage products, handicrafts made up of wood, shell, husk etc.

Dr.M.V. Rao, IAS, Director General, NIRD keenly observing coconut products in CDB stall.

Monthly operations in coconut gardens

May

Andaman & Nicobar Islands:

Continue irrigating the nursery. Irrigate the palms if dry spell prevails. Repair bunds and channels to facilitate drainage. Collect seednuts. Lay out nursery for raising seedlings. In sandy and sandy loam soils dig pits of 100 cubic cm and in clayey soils of 60 cubic cm for replanting and under planting at a distance of 7.5 meters both ways. In single hedge system provide spacing of 6mX9m and in double hedge 6mX6mx9m. The rows should be aligned in north south direction. In water logged areas raise mounds with alternate layers of clay and sand for replanting. Take linear trenches of 50 cm width and 60 cm depth between rows of palms. Arrange husk in these trenches layer by layer with concave surface facing upwards and cover with soil. Give a prophylactic spray with 1% Bordeaux mixture to all the palms in areas where the bud rot is occurring every year. Cultivate vegetables and other intercrops in the inter spaces.

Andhra Pradesh: Irrigate the garden regularly. Clear the irrigation channels, if necessary. Take all measures to conserve soil moisture by mulching coconut husk, coir pith, dry coconut leaves etc. in coconut basins. Continue collection of seednuts from selected mother palms. Plough the garden and broadcast green manure seeds for the enrichment of soil fertility. To enrich soil fertility apply tank silt in the garden. Tie the buckled bunches to avoid shedding of nuts. If the attack of blackheaded caterpillar is noticed spray the affected palms with 0.02 percent Dichlorovos or 0.05 percent Malathion and release larval or pupal parasites 3 weeks after spraying. If the attack of mite is noticed, spray neem oil formulation containing 0.004 percent Azadiractin (Neemazal T/S 1% @ 4 ml per litre of water). The spray droplets are to be directed towards the second to fifth immature bunches.

Assam: Transplanting of quality seedlings should be done in the main field. Irrigation should be continued if required. First split dose of fertilizers i.e. 500 gram urea, 1000 gram single super phosphate (SSP), 1000 gram muriate of potash (MOP) and 25 gram borax should be given during this period. The quantity of potash may be increased if nut fall and cracking of nuts are noticed. Prophylactic spray should be given to coconut trees by 1% Bordeaux mixture. Leaf axils must be filled with a mixture of 25 gram Sevidol (8G) and 250 gram of fine sand, if not done last month against the attack of rhinoceros beetle.

Bihar: Clean the irrigation channels, if necessary and continue frequent irrigation in the garden during summer months. In the case of basin irrigation 200 liter of water is adequate once in 4-5 days depending upon the moisture retention capacity of the soil. Young palms upto the age of 3 years should be irrigated at least once in 3 days. Young seedlings should be shaded properly. If there is water scarcity drip irrigation method can be adopted to save water. Mulch the coconut basins. Clean the drainage channels. Clean the coconut crowns and apply plant protection chemicals. If bud rot is noticed, cut and remove all the affected tissues and apply Bordeaux paste.

Chhattisgarh / Madhya Pradesh: Clean and if necessary deepen the irrigation channels and continue irrigation. Plough the land and destroy the weeds. Remove weeds from the basins. Take basins around the palms and mulch with coconut leaves, coir pith etc. Take plant protection measures in the garden. Harvest the intercrops like turmeric and vegetables.

Karnataka: Continue irrigation and collection of seednuts from selected mother palms. Start preparing the nursery beds for sowing of seednuts. Nursery

should be raised on well drained light textured soils having irrigation facilities. Application of sufficient quantities of organic manures and balanced doses of inorganic fertilizers is recommended to improve the nutrient status of the soil to meet nutrient requirements of the palms. Apply organic manure (FYM) @ 50 kg and neem cake @ 5 kg per palm per year. Keep a watch on the incidence of leaf eating caterpillar if the temperature is high and adopt appropriate measures if not taken earlier. If the attack of the mite is noticed, spray neem oil formulation containing 0.004 percent Azadirachtin (Neemazal T/ S 1% @ 4 ml per litre of water) or root feed @ 7.5 ml with equal quantity of water.

Kerala / Lakshadweep: Plant coconut seedlings if there are facilities for irrigation. The new roots will sprout before the onset of monsoon. This will help the seedlings to tolerate the water logging condition during monsoon. Continue collection of seednuts during the month. Apply river silt or tank silt to the palms at the rate of half tonne per tree in sandy type of soil. Take pits for new planting/ underplanting of coconut. If the attack of mite is noticed, spray neem oil formulation containing 0.004 per cent Azadirachtin (Neemazal T/S 1% @ 4 ml per litre of water). The spray droplets are to be directed towards the second to fifth immature bunches.

Maharashtra / Goa / Gujarat: In low-lying areas where coconut is planted on bunds, clean the channels between bunds, strengthen and level up bunds by adding top soil dug up from the channels. Continue collection of seednuts and store the collected seednuts in shade. Take pits for planting of seedlings.

Orissa: Continue irrigation. Remove weeds and mulch the basins with dry coconut leaves and coir pith. Husk burial may also be taken up in the basins. If attack of pests is noticed, adopt integrated pest management practices comprising of mechanical, chemical and biological methods. For the management of leaf eating caterpillar, cut and burn the severely infested lower whorl leaves and spray the under surface of the lower leaves with 0.02% Dichlorovos. Release parasitoids like braconids. To manage the rhinoceros beetle infestation, hook out the beetles using a beetle hook. Fill up the inner most 2-3-leaf axils with 25 g Sevidol (8G) mixed with 250 g fine sand per palm. Treat the manure pits with Carbaryl (50WP) at 0.01 % concentration. Root feed Azadirachtin 10000 ppm (7.5 ml) with 7.5 ml water against the eriophyid mite attack.

Tamil Nadu / Puducherry: Continue irrigation in areas where summer showers are not received. Apply tank silt in gardens with sandy soils to increase the soil fertility and to improve soil condition. Continue collection of seednuts. If the attack of mite is noticed, spray neem oil formulation containing 0.004 per cent Azadirachtin (Neemazal T/S 1% @ 4 ml per litre of water). The spray droplets are to be directed towards the second to fifth immature bunches. If the attack of blackheaded caterpillar is noticed spray the affected palms with 0.02 percent Dichlorovos or 0.05% Malathion and release larval or pupal parasites three weeks after spraying.

Tripura: Plough the interspaces for proper aeration of the soil. Clean the garden by weeding. Improve drainage facilities. Transplanting of seedlings should be taken up during this month. Prepare nursery beds for sowing of seednuts. Prepare raised beds in areas of poor drainage. The seedbeds are to be treated with 0.05 percent Chlorpyrifos twice at 20-25 days interval to protect the nuts from the attack of termites. Spray 1% Bordeaux mixture on coconut palms if bud rot is prevalent. Fill the top most 3-4 leaf axils of the palms with a mixture of 25g Sevidol (8G) with 250g fine sand per palm to protect the palms from rhinoceros beetle and red palm weevil.

West Bengal: Continue irrigation. Select the site for new plantation and dig out pits. Search for rhinoceros beetle on the crowns of the palms with beetle hook and kill the beetles. Fill the top most 3- 4 leaf axils of the palms with a mixture of 25g Sevidol (8G) mixed with 250g fine sand. Take up cultivation of intercrops like ginger, turmeric and other seasonal vegetables.

Market Review March 2012

Highlights

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

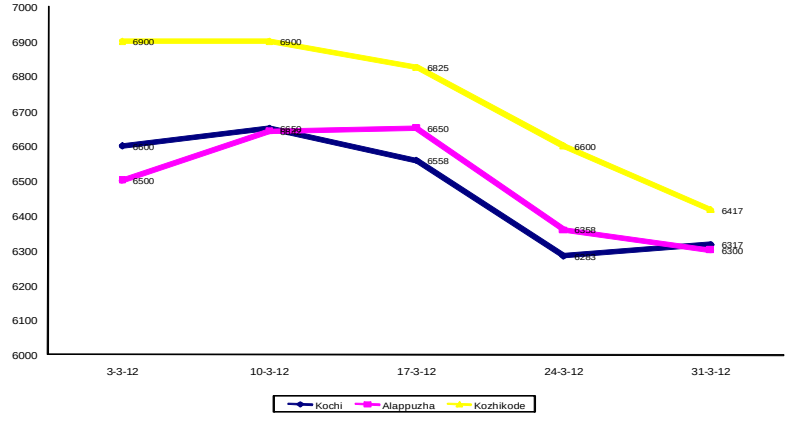
The market situation in March 2012 for coconut, copra and coconut oil was not different from the previous month. The downward trend continued. The prices of copra and coconut ruled below Minimum Support Price in major producing states and procurement activities were initiated by the Government machinery under Price Support schemes.

COCONUT OIL

The price of coconut oil quoted at all the major marketing centres in the country expressed a downward trend during the month under review. The weekly average prices steadily declined at Kozhikode market while it increased slightly in the first week and later declined during the month at Kochi and Alappuzha.

The monthly average price of coconut oil at Kochi was Rs. 6482/- per quintal. The price of coconut oil at Alappuzha market also moved in tune with the price behavior at Kochi market. The monthly average price was Rs. 6490/- per quintal. The monthly average price of coconut oil at Kozhikode market was Rs. 6728/- which was the highest average price recorded in Kerala markets during the February 2012. The prices in all the three markets recorded 1-2 percent decrease over the prices prevailed during February 2012.

The peak harvest season of Kerala is towards its end phase and the harvesting season in Tamilnadu too is progressing. Demand for copra and coconut oil is also usually low during this period since the major festive season is over. The sunny climate prevalent during the summer months may lead to more conversion to copra and coconut oil. This increased arrival may have an impact on the prices.



Price behaviour of coconut oil during March 2012

MILLING COPRA

The monthly average prices of FAQ copra recorded at Kochi market was Rs.4417/- per quintal and the monthly average prices of Rasi copra at Alappuzha market was Rs. 4588/- per quintal. The prices at Kochi recorded a 0.5 percent decrease over the previous month while the price of copra at Alappuzha recorded a 3 percent increase over the monthly average price of the previous month. The monthly average price of Rs.4471/- for Office Pass copra at Kozhikode (11.73 percent) market was considerably lower than that of the price of February 2012. The procurement operations under Price Support Scheme have already been initiated in Tamilnadu and Kerala by TANFED and NAFED respectively. In Kerala, the designated agencies, Kerafed and Marketfed have procured around 107 MT of copra while TANFED has procured around 2500 MT of copra till date. The steep fall that occurred in prices during the previous month has stabilized and the decrease has been very marginal compared to the previous month. The Minimum support price of milling copra has been fixed at Rs. 5100/- per quintal for 2012 season.

The monthly average prices of milling copra at Ambajipeta market in Andhra Predesh was Rs. 3853/- per quintal compared to Rs. 4000/- recorded during the previous month.

EDIBLE COPRA

The monthly average prices of Rajapur copra at Kozhikode market was Rs. 6073/- per quintal, which was lower by 11.32 percent compared to the price of the previous month. The monthly prices of ball copra at Kozhikode market averaged at Rs. 5452/- per quintal. The monthly prices of ball copra at APMC market Tiptur, in Karnataka averaged at Rs. 5581/- per quintal in March 2012 while it was Rs

5685/- in Bangalore and Rs. 5487/- in Arsikere recording a decline of 3-5 percent over the previous month.

The Minimum support price of edible copra has been fixed at Rs.5350/- per quintal for 2012 season.

DRY COCONUT

The monthly average price of dry coconut was around Rs. 5865/- per thousand nuts at Kozhikode market which was 3.11 percent higher than that of the previous month.

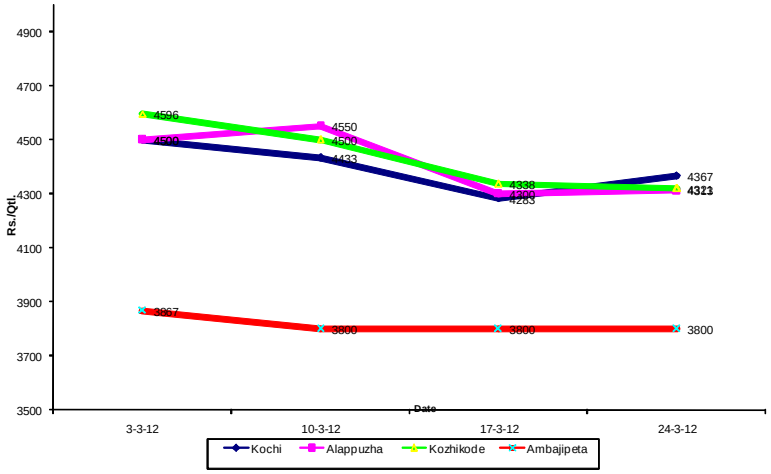
COCONUT

The monthly average price of Rs.7000/- per thousand nuts for dehusked coconut at Nedumangad market, was 5 percent lower than that of the previous month.

Arsikere APMC market recorded an average of Rs. 6197/- for thousand partially dehusked nuts which is 7.34 percent lower than that of previous month.

The monthly average prices of partially dehusked coconut at Bangalore APMC market was Rs. 6913/- which is 1.66 percent higher than that of previous month.

The monthly average price of partially dehusked coconut Grade-1 quality at Mangalore APMC market slid to Rs.10313/- per thousand nuts which is 2.63 percent lower than that of the previous month.



Price behaviour of milling copra - March 2012

The Government of India has declared the Minimum Support price of dehusked mature coconut with water at Rs. 14/- per kg.

TENDER COCONUT

Prices of tender coconut at Kochi market ranged from Rs.20 to 25/- per nut.

INTERNATIONAL PRICE

The monthly average price of US $1358 per MT for coconut oil in Europe (C.I.F. Rotterdam) for the month of March 2012 was marginally lower when compared with the price of the previous month by about 4 per cent and lower by about 29 percent compared to that of the corresponding month last year. The monthly average price of US$ 900 per MT for copra was marginally lower than that of the previous month by about 5 per cent and about 30 percent lower than that of the corresponding month last year. The domestic price of US$1285 for coconut oil at Kochi market was marginally lower than that of the international price.

The domestic price of coconut oil during the month of February 2012, in Philippines was US$1348 per MT and in Indonesia the price was US$1325 per MT. The international price of Palm oil, Palm kernel oil and Soybean oil were US$1152, US$1377 and US$ 1282 per MT respectively.

Market Price

Date	Coconut Oil			Milling Copra				Edible Copra	Ball Copra				Dry coconut	Coconut	Partially dehusked coconut		
	Rs./Qtl.												Rs./1000 nuts				
	Kochi	Alappuzha	Kozhikode	Kochi (FAQ)	Alappuzha (Rasi Copra)	Kozhikode	Karkala	Kozhikode	Kozhikode	Tiptur	Bangalore	Arsikere	Kozhikode	Nedumangad	Arsikere	Bangalore	Mangalore (Grade -1)
3-3-12	6600	6500	6900	4500	4400	4600	4000	6250	5633	5720	5700	5600	5700	7000	7500	6500	9100
10-3-12	6650	6642	6900	4500	5375	4596	3867	6150	5558	5656	5700	5567	5817	6500	6500	6517	9517
17-3-12	6558	6650	6825	4433	4550	4500	3800	6017	5308	5499	5700	5408	6092	6000	6500	7000	9533
24-3-12	6283	6358	6600	4283	4300	4338	3800	5950	5350	5500	5700	5403	6033	6000	6583	7000	9700
31-3-12	6317	6300	6417	4367	4313	4321	3800	5996	5408	5532	5623	5458	5683	6000	7208	7017	9700
Average	6482	6490	6728	4417	4588	4471	3853	6073	5452	5581	5685	5487	5865	6300	6858	6807	9510

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