APCC

The Cocommunity

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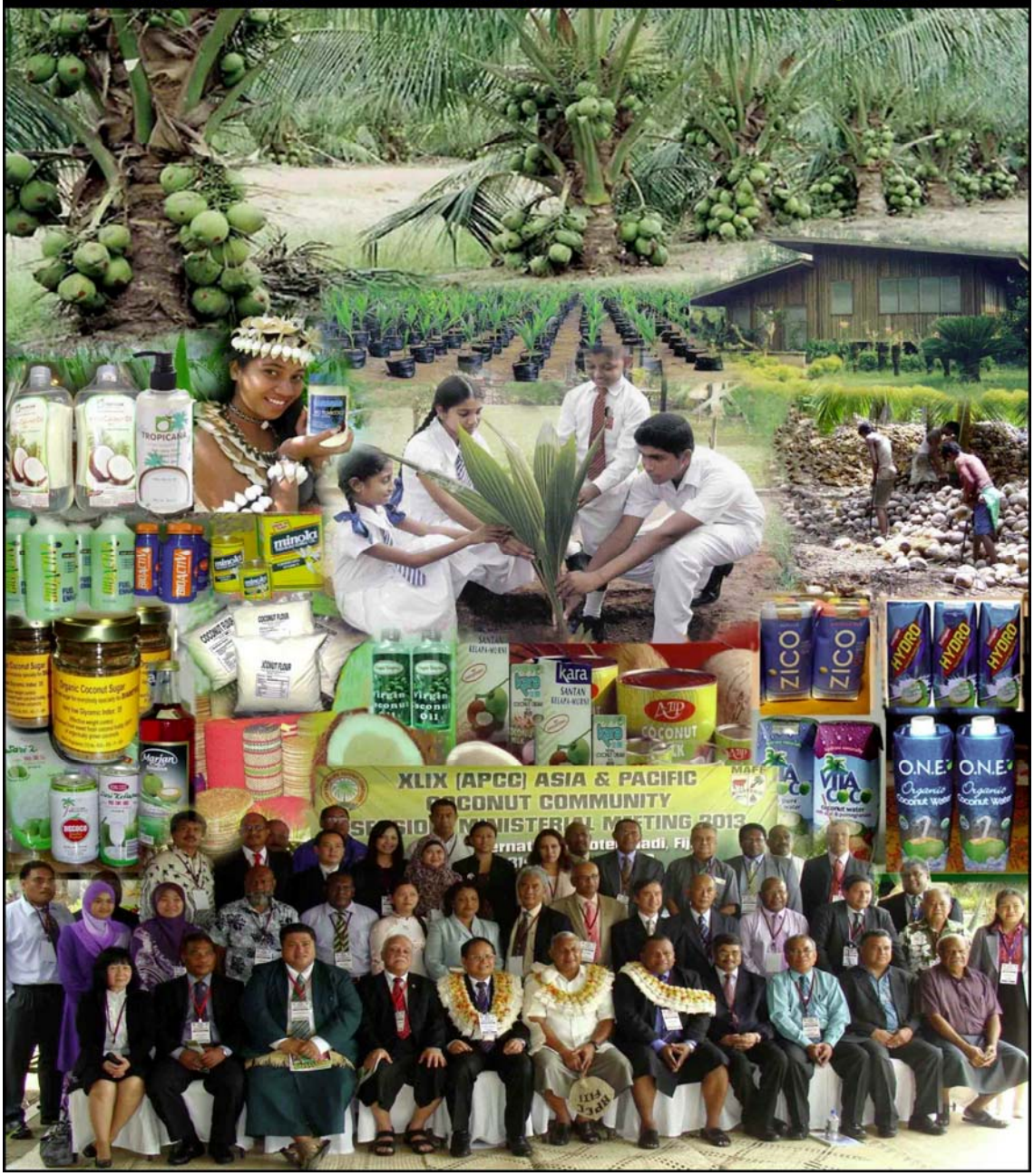

The ***COCOMMUNITY*** is the monthly Newsletter of the ASIAN AND PACIFIC COCONUT COMMUNITY (APCC) incorporating current news, features, statistical data, business opportunities, and market information relating to the world coconut industry.

Established in 1969, under the auspices of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), the APCC is an independent regional intergovernmental organization which consists of fifteen member countries and accounts for 85-90% of the world production of coconut. The APCC member countries are: the Federated States of Micronesia, Fiji, India, Indonesia, Kiribati, Malaysia, Marshall Islands, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Vanuatu, and Vietnam.

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Table of Contents

EXECUTIVE DIRECTOR SPEAKS ……..

"Ensuring Viabilities for Coconut Farmers"

*I*ncreasingly the coconut sector has sought to convert its emerging challenges into opportunities so that the livelihood of so many rural families is sustained under the coconut tree. During a recent visit to APCC project sites in PNG, the Chairman of APCC Technical Working Committee, Dr. Ponciano A. Batugal, in his talk with farmers offered a basic advice to ensure farm and farmer viability which is to grow what is *marketable* and *profitable*. This advice focused on economic activities on a coconut farm whether it is alternate crops, small livestock or even marine aquaculture. Much of these options would vary by region and country.

Synergies created for greater research and development cooperation between high profile international institutions as recently demonstrated between the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) and the Department of Science and Technology (DOST) with Yucatan Centre for Scientific Research (YCSR) in Mexico significantly increases potential benefits to farmers. The MOU signed paves the way to strengthen agricultural biotechnology concerns that focus on in-vitro culture of coconut. Through this healthy development and exchange the farmers would be able to have access to the most elite and appropriate coconut planting material to produce coconuts that the consumer market demands. The recent move for partnership between Sri Lankan private sector and Kerala firms in India focusing on coconut products, high tech agriculture and value added vegetables would also increase sustainable opportunities for farmers.

Focus on sustainability has led a community-based farmer group in the Philippines to pilot programs that target aggregate income per annum on smallholder farms at USD$20,000 per hectare and even if a farmer achieves 25% initially it is still considered a reasonable level of income. According to *Indian Coconut Journal, March 2014*, the scientifically designed coconut-based farming system models at Central Plantation Crops Research Institute (CPCRI) in India demonstrate capability to generate higher income and increase employment for the smallholder. Annual coconut production increased by 80% to 112 nuts/palm from 62 nuts/palm previously recorded. Interestingly yields were found to be much higher with banana and root crops as intercrop alternatives in the garden.

Complimentary efforts continue in product diversification as the huge potential for expansion in agri-business is still not fully exploited however progress in Asian region countries such as India, Philippines, Sri Lanka, Thailand, Vietnam and Indonesia is a clear indication of the trend of value addition initiatives beginning to create waves on the global market for the numerous high value products of the coconut. It should also be mentioned here that the Central American countries such as Brazil and Mexico demonstrate similar commendable commitment in sustainable development of the coconut sector as leading exporters of coconut water, improved farming practices and in their pursuit of excellence in agriculture research and development.

As the world becomes more concerned with its declining human health indices the coconut sector is offering products of immense health benefit to humanity from the most nutritious fresh Coconut Water to Virgin Coconut Oil, Coconut Milk, Desiccated Coconut and Coconut Sugar to name a few, most of which are grown organically by small coconut farmers.

It would be very good to see coconut more growing countries demonstrate a two-fold commitment through increasing own consumption of coconut products combined with the increase in new plantings and rehabilitation of existing coconut planting areas.

URON N. SALUM

PREVAILING MARKET PRICES OF SELECTED COCONUT PRODUCTS AND OILS

Price of Copra and CNO decrease while price of DC increase except in Sri Lanka where Copra and CNO increase and DC decrease.

COPRA: The price of copra in Indonesia (Surabaya) was US$768 in April, which is decrease from last month's price of US$778/MT and higher than 2013 average price of US$741. When compared to last year's data for the same month the price is US$340 higher.

In the domestic market of the Philippines (Manila), the average copra price was at US$843/MT. The price decreased by 5.9% over the price in March 2014 and about 79% higher when compared to the price of US$471/MT in April 2013. In the Philippines, out of the eight copra market centers, the highest price at US$869/MT was recorded in Quezon, and the lowest price at US$677/MT was in N. Mindanao.

COCONUT OIL: The average price of coconut oil in Europe (C.I.F. Rotterdam) for the month of April 2014 decreased by US$92 to US$1,293/MT from US$1,385/MT in March 2014. This price is higher by 61.6% when compared with the price in April 2013. The price of April 2014 is lower than the average price of 2014 which is US$1,304 per MT.

The average local price of coconut oil in the Philippines in April 2014 was US$1,259/MT. This was US$89 lower than the price in March 2014, and it was US$7 higher if compared to the average price in 2014 at US$1,252.

The average domestic price of coconut oil in Indonesia in April 2014 decreased US$52 compare to the previous month from US$1,363/MT to US$1,311/MT. April 2014 price was 62.66% higher than average price of the same month of 2013 which was US$806/MT.

COPRA MEAL: The average domestic price of the commodity in the Philippines at selling points was quoted at US$249/MT. The price was US$7 higher than price of the previous month.

DESICCATED COCONUT: The average price of desiccated coconut (DC) FOB Manila, Philippines in April 2014 was US$2,797/MT. This price was US$78 higher than that of the previous month's price and US$1,050 higher than the price of the same month last year. In Sri Lanka, the domestic price of desiccated coconut in April 2014 was US$2,281/MT or US$16 lower than the price in March 2014. Meanwhile, the price of DC in the domestic market in the Philippines was US$2,788/MT, which was US$88 higher than the previous month's price at US$2,700/MT and US$1,036 lower than the price in the same month last year. Indonesian price was US$2,456/MT, increased by US$16 from last month's, and increased by US$937 from last year's price.

COCONUT SHELL CHARCOAL: In the Philippines, the average price of coconut shell charcoal was US$324 for April 2014. Meanwhile, in Sri Lanka, the average price of the commodity in April 2014 was US$404/MT. The average price of charcoal in Indonesia for April 2014 was US$315/MT, which was US$33 lower than last year's price for the same month.

COIR FIBRE: Coir fiber traded in the domestic market in Sri Lanka was priced at US$207/MT for mix fiber and US$479 - 613 for bristle. The Indonesian price for mattress (mixed) fiber was US$390/MT in April 2014.

Prices of Coconut Products and Selected Oils (US$/MT)

Products/Country	2014 Apr.	2014 Mar.	2013 Apr.	2014 (Annual Ave.)
Fresh Coconut				
Philippines (Domestic Husked)	226	218	131	216
Copra				
Philippines/Indonesia (CIF Europe)	851	907	528	867
Philippines (Domestic, Manila)	843	896	471	844
Indonesia (Domestic, Java)	768	778	482	741
India (Domestic, Kerala)	1,197	1,199	848	1,214
Coconut Oil				
Philippines (CIF Rott.)	1,293	1,385	800	1,304
Philippines (Domestic)	1,259	1,348	792	1,252
Indonesia (Domestic)	1,311	1,363	806	1,256
Sri Lanka (Domestic)	2,281	2,124	1,939	2,157
Desiccated Coconut				
Philippines FOB (US), Sellers	2,797	2,721	1,747	2,536
Philippines (Domestic)	2,788	2,700	1,752	2,506
Sri Lanka (Domestic)	2,281	2,297	1,751	2,221
Indonesia (Domestic)	2,456	2,440	1,519	2,426
Copra Meal Exp. Pel.				
Philippines (Domestic)	249	242	n.q.	256
Sri Lanka (Domestic)	417	413	347	403
Indonesia (Domestic)	255	258	204	252
Coconut Shell Charcoal				
Philippines (Domestic), Visayas, Buyer	324	315	343	320
Sri Lanka (Domestic)	404	375	346	390
Indonesia (Domestic), Manado, Buyer	315	337	348	330
Coir Fibre				
Sri Lanka (Mattress/Short fibre)	207	214	123	210
Sri Lanka (Bristle 1 tie)	479	514	436	489
Sri Lanka (Bristle 2 tie)	613	658	655	629
Indonesia (Mixed Raw fibre)	390	384	293	371
Other Oils				
Palm Kernel Oil Malaysia/Indonesia (CIF Rott.)	1,285	1,383	828	1,273
Palm Oil, Malaysia/Indonesia (CIF Rott.)	908	940	843	914
Soybean Oil, (Europe FOB Ex Mill)	745	769	1,101	819

Rate of Exchange: *April 30, 2014:*

1US$=~~P~~44.47 or Indo.=Rp11,590 or India=Rs60.65 or SL=Rs130.63
Euro=US$1.387 n.q.: not quoted

MARKET ANALYSIS OF COCONUT OIL

The highest ever recorded price of coconut oil [CNO], CIF Rotterdam was seen in February 2011 at US$2,285/MT. The price then took bearish position for almost two years. In October 2011 it decreased sharply by 96.14% to US$1,165/MT and further down to as low as US$800/MT in April 2013. Nevertheless since then the trend has shifted back showing a bullish market until the first quarter of 2014. Based on current price trend and the predicted long term impact of typhoon Haiyan in the Philippines as main CNO producer, it is estimated that the price of CNO will still increase though in lower rate at least for two to three years ahead.

The improved price of CNO is also affected by the significant increase of the global price of other coconut products such as coconut milk and desiccated coconut. The price of DC for example was increasing by 76% within the last 8 months which was from US$1,587/MT in August 2013 to US$2,797/MT in April 2014. Such increase will encourage DC producers to boost its production and will, on the other hand, affect the already tightened supply of copra for CNO. As such coconut product factories in producing countries will have to consolidate their raw material supply through import from other places. Increased export of raw mature nut is already seen in major coconut producer such as Indonesia.

The other cause that will improve CNO price is the government plan of some CNO producing countries especially the Philippines to double the biodiesel blend from the current 2.5% to 5%. Such increase is the result of the countries' decision to reduce dependency and import volume of fossil fuel. In the Philippines, in 2012 about 140-150 thousand tons of CNO were used for the production of biodiesel and it will increase to approximately 350 thousand tons, when the mandate comes to full implementation. Such change will reduce the Philippines export of CNO hence CNO supply in the global market.

The price of Palm Kernel Oil [PKO], which has the strongest correlation to CNO price than other vegetable oils, experienced similar trend. The price of PKO reached the highest in February 2011 but decreased gradually to US$725/MT in December 2012, the lowest within the last three years. From January to February 2013 the price of PKO begun to recover with an increased price of 9% to US$850/MT. Since then, the price of PKO has gradually increased showing a positive development and reaching US$1,285/MT.

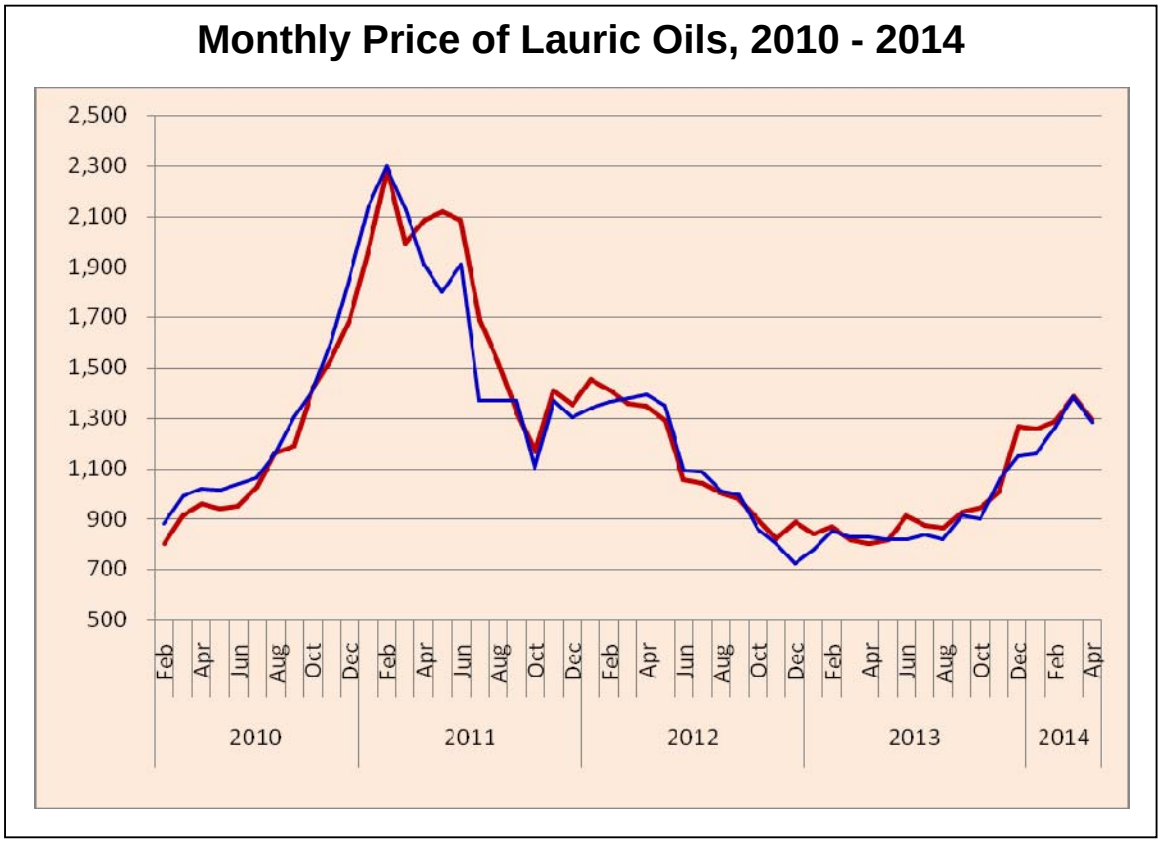
Oil World has estimated that the production of CNO for the period of October 2013 - September 2014 would be 3.35 million tons which is a decrease of 3.1% from the same period of last year which was recorded at 3.46 million tons. The production was 7.4% higher than that of 2012 and 8.4% higher than the year 2011 which was noted at 3.09 million tons. The production of PKO for the same period was estimated to increase to 6.48 million tons from 6.17 million tons last year or up by 5.02%.

The total production of lauric oils [CNO and PKO] for the same period was estimated at 9.83 million tons which is a slight increase from the same period of the previous year. Consistent with the finding, Oil World estimated that world CNO export for the

period of October 2013 – September 2014 would decrease by 8.65% which is expected to continue until the first half of 2014 especially with the tightened availability of copra as raw material for CNO.

In relation to the decrease of CNO supply, the Oil World has forecasted that the world production of copra would decrease. It is estimated that the copra production would be 5.36 million tons in 2014 down from 5.46 million tons in 2013. The forecasted decline in copra production is caused mainly by adverse climate and weather conditions including the long term impact of typhoon Haiyan that recorded damages to 30 million coconut trees in the Philippines.

The Philippines CNO production is estimated to decrease by 5% from 1.511 million tons to 1.435 million tons. It is interesting to note that in 2013 the Philippines export of CNO increased by 32% to 1,124,786 MT from 852,234 MT in 2012. The industry proved to adapt well with the situation by importing raw material and crude coconut oil from other origins for processing and export. Indonesia is also predicted to experience a slight decrease in production by 1.5-1.8% in 2014.



COMMUNITY NEWS

APCC PARTICIPATED IN AITIS 2014

On 16 April 2014, APCC Assistant Director gave presentation entitled "Development Opportunities of Indonesian Coconut Products" at Jakarta International Expo, Jakarta during AITIS (APKASI International Trade and Investment Summit) 2014.

She was accompanied by APCC Documentalist and Marketing Development Officer. In her presentation which is in line with the objectives of this annual meeting of Regency Administration Association (APKASI), she highlighted the Indonesian coconut industry situation and world coconut industry situation.

The objectives of this event were to encourage or boost agricultural investment in coconut producing provinces of Indonesia and to convince the audiences that coconut industry is a promising sector. In her presentation she offered the following recommendations: 1) The global market of organic product is still open and increasing annually. Indonesia has opportunity to convert ordinary coconut farms into organic farms. Fiji has already certified one island to obtain organic and produce organic coconut products for niche market; 2) As coconut industry is promising business, Indonesia has more opportunity, some businessmen from Sri Lanka, India, and Thailand have entered into joint ventures with Indonesian; 3) Maluku and Papua have 9% of total production consisting of 4 provinces. In long term, coconut farmers should get higher price for their coconuts; 4) In the case of Philippines, Vietnam, Sri Lanka, and India they can improve the export volume and value because they organize annual coconut festival or expo. It is suggested that the provincial government to conduct a study tour to that kind of expo or visit other country so they can see more opportunity for coconut development; 5) The market feasibility study for specific product should be conducted for product development. For example, Fiji SPC has done a study and they know what the market needs, what product should be produced and go further and 6) The four provinces in Maluku and Papua accounts for 9% of total production, with improved infrastructure and logistics they should earn higher price for their coconuts.

COCONUT PRICE GOING UP, COCONUT FARMERS IN LAMPUNG REJOICE

Coconut farmers in several villages in Lampung Province welcomed the rising price of coconuts in early 2014, having previously had declined sharply in the mid to late 2013. Ilyas (60), a coconut farmer in Kampungbaru village, Marga Punduh District, Pesawaran Regency, said that the price of coconuts in the village was quite well, even it was the highest during the coconut harvest season in early 2014. "Coconut price now rises, after falling," said Ilyas who claimed to have seven locations of coconut plantation.

He explained that the price of the super quality coconut (big fruit) was Rp 2,000/nut from only about Rp 1,600 to Rp 1,750/nut. Then a medium-size nut rose from Rp 1,000 to Rp 1,400 to Rp 1,500/nut, and third grade quality (small) l nuts were previously priced at around Rp.500 to Rp.600/nut became Rp750/nut. Papi, a local coconut trader said that "The coconut price this year is the highest and is expected to persist or even higher."

In early 2014 the coconut farmers in Kampungbaru village and its surrounding areas were in coconut harvest season which happens once in every three to four months. Despite the increasing price of coconuts, the coconut farmers and traders claimed that the coconut harvest in early 2014 was still somewhat lower than that of normal conditions. In 2012 coconut plantations along the coastal areas were hit by droughts which resulted in the declining coconut production in 2013.

"During 2013 coconut production declined, the nuts were small and the price was low. This year the coconut yields are recovering and the price is expected to be

high," said Ilyas again. The coconut price increase also occurred in Kotabatu Village, Pubian District, Central Lampung Regency about 100 km Northwest Bandarlampung, and Wonoharjo Village, Bumi Agung District, Waykanan Regency, Lampung Province about 250 km north Bandarlampung.

Lampung Province is one of coconut production centers in Indonesia, with coconut plantation areas of more than 150,000 hectares. The coconut plantation areas are located in several regencies, such as South Lampung, Tanggamus, Central Lampung, East Lampung, Pesawaran, and North Lampung.

The coconuts in these areas are used as the raw materials of desiccated coconut, coconut milk, cooking oil, and copra in Lampung province. Likewise, they are also supplied to meet the needs of neighboring provinces, such as southern Sumatra, Jakarta, West Java, and the Banten Province.

PAC OKAYS R88-CR COCONUT PROJECTS

The Project Approval Committee (PAC) meeting, which was held on Technology Mission on Coconut (TMOC) here, has approved 30 projects with an outlay of R87.97 crore and subsidy of R11.15 crore.

The 30 projects given approval include three works on research, one on pest and disease management and 26 on processing and product diversification. Out of 26 projects on processing and product diversification, 12 were exclusively on Neera processing and packing units.

All the coconut producer companies of Kerala registered with CDB submitted their project on processing of Neera and Neera-based value added products, and all the 12 projects were sanctioned with an outlay of R5,982.02 lakh and subsidy of R600 lakh.

The output of Neera expected from these units will be 1.47 lakh litre per day, of which 60 per cent will be processed and packed as nutritious natural Neera drink and 40 per cent as neera honey, neera sugar and other value added products from Neera.

Under the project component, 'Processing and Product Diversification', three integrated coconut processing units, six desiccated coconut powder manufacturing units, one coconut chips unit, a ball copra unit, two coconut shell charcoal units and a coconut shell-based activated carbon unit were also given sanction.

In Kerala, 12 Neera processing and packing units, three integrated coconut processing units, one unit for desiccated coconut powder for processing 25,000 nuts per day, one unit for coconut chips for processing 2,000 nuts per day, and one unit for ball copra having the capacity to process 310 Qntl Ball Copra per day were approved.

In Karnataka, two units of desiccated coconut powder having a capacity to process 10,000 and 32,000 nuts per day respectively, one unit of coconut shell-based activated carbon unit for processing 3,600 ton a year were sanctioned.

In Tamil Nadu, three units of desiccated coconut powder having a capacity to process 40,000, 35,000 and 80,000 nuts per day, one unit of coconut shell-based activated carbon unit for processing 30,000 Kg coconut shell charcoal a day were sanctioned. *(http://www.newindianexpress.com)*

MORE PROJECTS TO PRODUCE NEERA IN INDIA

Coconut producer companies in India, formed under the aegis of the Coconut Development Board, have begun work on projects to produce 'neera,' the sweet toddy tapped from inflorescence of coconut palm. Some of the companies have plans to launch the product next month, according to a report from *The Hindu*.

Tejaswini coconut producers' company, Cherupuzha, Kannur, is planning to set up a plant which can process 1,000 liters a day. The society aims at tapping 1,500 coconut palms for which technicians are being trained. The plant will produce coconut jaggery with

plans to export the product. While neera will be priced at a minimum of Rs.100 or more a liter, jaggery will be sold at Rs.500 a kg.

Another farmer group at Muthalamada is planning to set up a plant with an investment of Rs.6 crore. The federation has identified 1,500 palms and plans to produce 10,000 liters of neera a day. The organization is in the process of providing training to technicians to be provided at Karnataka Horticulture Department's neera plant at Mangalore. Kaippuzha coconut producers' company, Kollam, has plans to begin production in July this year. The construction of the neera processing plant to process 15,000 liters per day in 1.5 acres of land, at Kadapa, Mainagapally, will begin next month. (*UCAP Bulletin)*

INDONESIAN GOVERNMENT ENCOURAGES COIR PROCESSING INDUSTRY

Indonesian government through the Ministry of Industry encourages the of processing coconut husk into coir fiber for export. The program is done by providing two sets of coir fiber processing machine to farmer groups in two different villages in Kuala Ampar and Indragiri Hilir Regency Riau. The handing over of the coir machinery set was done by Mr. Kris Sasono N. Wibowo, representative from Directorate of Small Medium Enterprise Area I of Indonesian Ministry of Industry accompanied by Mr. Ady Indra Pawennari from Indonesian Coir Industry Association. Currently according to AISKI Indonesia has approximately 110 coir processing factories in the country which are mostly concentrated in Lampung's, East Java, Jogjakarta, North Sulawesi, and some other provinces in Sumatera. Over 60 of them are active members of the association that was established in 2010. The association estimated that to date only 3.2% of the country coir fiber potential have been processed while 96.8% are wasted or burned. Further, Mr. Efli Ramli chairman of the association expected that besides increasing the number of processing factories up to 500s the government should also encourage or develop the downstream coir processing which is now limited in numbers and on a small scale basis. Among the product that AISKI expects to develop are finished products such as doormat and geo-textile which would supply domestic need for land rehabilitation and conservation effort.

INDIA-DWARF PALMS GET A BIG PUSH

A census of the dwarf variant of coconut palms is on in the district. The Department of Agriculture is recording details of the native variants to hybridise them for better yield.

With the support of seven trained agriculture officers, the information gathering process is underway in seven grama panchayats in the district. The mission is aimed at identifying 100 best dwarf coconut farms from these panchayats and shortlisting the best from this group to harvest quality nuts for hybridisation. "Progeny orchards" in two agricultural farms of the department — at Koothali and Thikkodi — will be prepared for the purpose.

Farmers will be offered Rs.23 for each seed supplied for the hybridisation project. Later on, farm owners will be trained and equipped to handle all the works independently. As per existing plan, 100 model farms will be prepared for the experiment. "The officers participating in the survey are trained by the Central Plantation Crops Research Institute to identify the best quality dwarf palms and gather its specifics from farmers," says K.A. Ayishabi, Deputy Director of Agriculture (Youth Programme), in Kozhikode. The data collection process in this Statewide mission will be scientific, she adds.

80 farms

Under the scheme, agriculture officers have already collected information on 80 farms growing dwarf seedlings. Farmers have been asked to pass additional information on model dwarf farms and cooperate with the new mission. Panchayats now part of the venture are Koyilandy, Arikkulam, Chengottukavu, Chemanchery, and Moodadi.

"The department is promoting dwarf palms to make cultivation cost effective," says

R. Bindu, Technical Assistant with the Agriculture Department. The biggest attraction of dwarf palms is that there is no need for a palm climber to pluck nuts from them, she adds. Fast and better yield and high resistance to diseases are the other incentives. *(http://www.thehindu.com)*

LOW COPRA PRICES PROMPTS KARKAR BIOFUEL PRODUCTION

The plummeting world copra prices has forced copra plantation owners to look for other avenues to raise the value of their copra.

The average price per metric tonne of copra is now just over US$700, down from US$1,500 last year, according to the latest figures from the Bloomberg financial news service.

The commodity crop experienced a long and steady rise in value in the early 2000s, but prices have fluctuated since the start of the global financial crisis.

The last major price slump occurred in 2009, when the cost of a tonne of copra plummeted to US$400.

Copra production in the South Pacific has now dropped, with the exception of Papua New Guinea, Solomon Islands and Vanuatu.

In Papua New Guinea's Madang Province, a company operating on a small plantation on Karkar Island has trialled the concept of producing bio-diesel fuel from coconut oil and has succeeded in making its own fuel.

The company, PNG Biofuel Limited, has invested in a pilot programme to use the humble coconut to produce environmentally-friendly bio-diesel fuel.

Company Director Brett Middleton said: "Copra prices last year dropped severely and there was really no income to be earned from it. In the last two years, we were looking for avenues to raise the value of our copra."

Middleton belongs to an agricultural family connected to the island for almost 100 years. They run Kulili Estates (coconut and cocoa plantations) on the island.

His grandfather Max Middleton took over the plantations from the Germans in the mid-1920s. He spent most of his adult life there apart from the war years.

The plantations on the island are supplying coconuts to develop the environmentally friendly fuel alternative.

"It is not bio-fuel or coconut oil mixed with fuel. It is true diesel. You will be able to run your car 100% on this fuel alone. You can mix it with diesel if you wish. But the quality of our diesel beats engine fuel currently on the market. There are no exhaust fumes," Middleton said.

PNG Biofuel General Manager, Kevin Bolton and a small group of locally employed staff are producing the country's first workable bio-diesel fuel from the humble coconut.

This product is powering lights, trucks and generators around the plantations estate on Karkar.

The bio-diesel fuel is being used on all machinery that has diesel engines. The fuel is safer and cleaner. Machines using the fuel do not emit dirty fumes, Bolton said.

Alternative fuel

If the project becomes successful and help is given where needed, the technology can be used to create an alternative to fossil fuel and make use of the coconuts lying idle since the copra prices dropped.

At present, they are producing 4000 litres of bio-diesel a day, but the plan is to build a new extracting plant which would be sufficient to produce many thousand of litres of bio-diesel a day.

Already Kulili Estates is providing bio-diesel at their gas station 30% cheaper than imported fossil fuel from Madang.

They have been using the fuel in their generators, cars, ships and even the police depend on bio-diesel produced at Kulili Estates.

Middleton is having discussions with the national government about securing additional funds and making Karkar totally dependent on bio-diesel produced by Kulili.

Obviously, the potential is enormous and the PNG National Planning Minister has expressed interest in expanding what has been achieved on Karkar to the rest of PNG.

It is relatively low-tech process and the quantity can be increased substantially.

The first known usage of this kind of fuel was in Bougainville during the crisis. However, the oil wasn't refined to remove access water well, causing rusting in the engines.

In the South Pacific, although coconut oil has yet to be adopted on a large scale for electricity generation, several demonstration projects have been carried out in the region.

The first was at Ouvéa in the French territory of New Caledonia, where generators running on crude coconut oil were installed in 1999 to provide power totalling 315 kW to an oil mill and two desalination plants.

More recently, urban utility companies in Vanuatu and Samoa have successfully trialled the use of small quantities of coconut oil blended with diesel in their existing generators.

Rural electrification schemes have also been carried out using coconut oil as a fuel source. An early demonstration project was on the Fijian islands of Vanubalavu and Taveuni, where dual-fuel generators capable of using coconut oil together with diesel were installed by the government (with French support) in 2001. *(http://www.islandsbusiness.com)*

CARGILL TO HELP REHABILITATE VISAYAS COCONUT FARMS

Cargill Philippines Inc. and the Philippine Business for Social Progress (PBSP) recently announced a joint project designed for the rehabilitation of coconut farms in Leyte which was ravaged by super typhoon Yolanda in November 2013. The project, which costs P11 million, aimed to propagate a total of 140,000 seedlings to be planted in 600 hectares of farm over a two-year period starting in the second half of 2014. Cargill officials said in a briefing the initiative will be rolled out in Barangay Inangatan in Tabango, Leyte.

Cargill and PBSP will work with the Philippine Coconut Authority, the Department of Agriculture, as well as the Visayas State University to plant 35,000 seedlings of fast-growing variety in 150 hectares of farms for the initial half year of implementation. Also, these farms will be intercropped with corn to maximize the use of the land and the farmers' time while waiting for the coconuts to bear fruit.

Aside from the propagation of coconut seedlings, the project will establish two 5,000-square-meter demonstration farms that will promote integrated systems. The idea is to show that coconut farmers can also engage in the production of cash crops and other activities like fish farming and the raising of poultry and livestock on a small scale. In addition, coconut farmers will receive training on Integrated Farming Systems from PBSP's Center for Rural Technology Development. *(UCAP Bulletin)*

SRI LANKAN COMPANIES INTERESTED IN TIE-UPS WITH KERALA FIRMS ON COCONUT BUSINESS

Sri Lankan companies have shown interest in business tie-ups with Kerala-based companies in setting up coconut products manufacturing facilities, according to a report from *Business Line*. The shortage of coconuts in the island nation due to rapid urbanization has prompted these firms to try investments in Kerala, India. Prominent among them are Hayleys and CIC, said Shivdas B. Menon, Chairman of Made in Kerala, a CII initiative.

Menon, who led a 10-member CII delegation jointly with the State Government to Sri Lanka, said that the neighboring country is more advanced than Kerala in coconut processing and a possible tie-up with the companies would boost the ailing coconut

sector in Kerala and help companies here to flourish. “The response to our visit to Sri Lanka was very positive. We are hopeful of taking the new partnership forward”, he said. The focus of the CII delegation was on coconut products, high tech agriculture and value added vegetables.

Besides Sri Lanka, the industry body is also looking at firms from other coconut producing countries like Indonesia, Malaysia, Vietnam and Thailand for setting up units in Kerala, Menon said adding that most of the companies have shown interest to work in India considering the nation’s big domestic market. *(UCAP Bulletin)*

COUNTRYSIDE INVENTOR MILKS COCONUT SUCCESS

Growing demand for coconuts pushed this co-operative chairman to invent a machine that can break open the thick-shelled fruit in far less time than the standard method. Khoa Chien and Giao Hoa report.

Le Tan Ky is the Chairman of the VietGap co-operative in the southern province of Ben Tre, which provides pomelos and coconuts for domestic and foreign markets. He has also earned a reputation for inventing an automatic coconut-shelling device. These machines have proved their worth by making production more efficient and replacing traditional methods which were unsafe and slow.

"I dropped out of school for military service, and then I left the army to continue my studies. I had the opportunity to try various jobs in many places. In 2009, I decided to return to my homeland to get involved in the sale of pomelos and coconuts to buyers in HCM City," says Ky.

As things settled down, Ky started to receive more and more orders, but he was unable to process them quickly enough because everything was done by hand.

The dilemma pushed him to invent a coconut sheller. After days of pondering and experimenting with different ideas, Ky finally completed his machine.

At the end of 2011, his coconut sheller was finally finished. The machine is 1.2m high with two knives. The coconut is placed on six fixed pointed heads, and with two sharp twists, the shell falls off.

According to Ky, the main advantage is the speed of the machine.

"It can cut open a coconut in 30 seconds. A machine costs VND15 million, much cheaper than those imported from foreign countries," adds Ky.

Thick-skinned: The new machine makes quick work of the durable coconut. The birth of the device has enabled his workshops to overcome the shortage of workers and handle more orders. Ky has also registered to copyright his invention, and he's excited by the interest he has received.

"I have sold 13 machines in Viet Nam and two more overseas. It was really unexpected. I only regret one thing: I don't have enough money to produce them in bulk at the moment, I am only able to make one or two at a time.

Cu Van Thanh, Director of the Luong Quoi Co Ltd, has bought two of the machines.

"We have only used them for a short time so it's hard to evaluate their effectiveness. However, the initial results are good and it takes us half the time to shell the coconuts than it does by hand, enabling us to meet our orders with foreign partners," he said.

Ho Vinh Sang, Chairman of the Ben Tre Coconut Association, spoke highly of Ky's invention and his commitment.

"The annual coconut output of Ben Tre is 60 million. Farmers depend on different varieties of coconut, and each has its different costs, so they must focus on the kind of fruit the market needs."

"Domestic entrepreneurs have made deals to export green coconuts which bring high profits, but that means a lot of hard work. I hope this machine will speed up the process, but I still think a few adjustments are needed

to make it work more effectively," says Sang. *(http://www.bentrecoconut.com)*

CHINA EDIBLE OIL PRODUCER SET TO INTRODUCE OIL PRODUCTS IN MALAYSIA

China-based edible oil producer, Henan Xinghe Oil and Fat Co Ltd, plans to introduce its branded oil products to Malaysia in the wake of a proposed reverse takeover (RTO) of Key West Global Telecommunications Bhd. Director Ma Guoliang said the move will mark the first foray of the company, one of China's top six edible oil makers, out of its home turf. "Malaysia has a strong demand for peanut oil and we are upbeat on the prospects here," said Ma after attending Key West's extraordinary general meeting (EGM). Key West's shareholders approved the reverse takeover proposal by Henan Xinghe at the EGM.

Henan Kinghe Oil and Fat is 91.15 percent owned by Supreme Global Group Ltd., a China government-linked company, which is majority controlled by Testa Holdings Bhd. The company positions its "Xinghe" branded oil in China as a premium brand but price them marginally lower than its rivals. Its oil products are available in eight provinces and cities such as Henan, Beijing, Shandong, and Hebei. It also plans to set up a plant in Malaysia to process palm oil for export back to China. *(UCAP Bulletin)*

KING REMINDS TONGANS OF THEIR VULNERABILITY TO CLIMATE CHANGE

King Tupou VI reminded Tongans of their islands' vulnerability to the effects of climate change, in his message for the closing of the 2013 Session of Tonga Legislative Assembly, Thursday.

The king stated that the major damage caused by Tropical Cyclone Ian in Ha'apai in January this year, had reminded us just how unexpected natural disasters are.

Lord Kalaniuvalu Fotofili accompanied by Lord Tu'iha'angana and Lord Luani read out the King's address at Parliament House.

The king stated that Government had carried out works to help meet the urgent needs of the people in Ha'apai by distributing materials for temporary housing, water supply and food. Work continued to prepare for the Ha'apai reconstruction, expected to start later this year, as well as efforts made to restore the stability of food supply on the outer island.

King Tupou VI thanked donor countries, as well as Tongans residing locally and overseas their humanitarian assistance after the cyclone.

In the renewable energy sector, he said work was undertaken by Government to reduce Tonga's reliance on fossil fuel and to achieve a target of supplying 50% of electricity generation from renewable sources by 2020.

He said parliament in this session had deliberated and passed Bills that would help the country's development, despite the challenges faced over the last couple of months.

The short low-key ceremony was attended by only the members of parliament, parliament staff and media. The session which was adjourned from October last year had reconvened since Monday, 31 March

The 2014 Parliament session will open in June to discuss the National Budget 2014-2015. *(http://www.islandsbusiness.com)*

MARKET NEWS

PHILIPPINE COCONUT PRODUCTS EXPORT DROPPED SHARPLY IN MARCH

UCAP preliminary data show Philippine export of coconut products in March plunged anew year-on-year for the sixth straight month. Total stood at 112,238 MT in copra terms from 264,643 MT last year, a steep dive by 57.6%. Volume likewise dwindled from prior month unofficial figure at 129,205 MT by 13.1% and performed poorly as well when compared with the monthly average last year at 162,711 MT (based on Philippine Coconut

Authority official data for the calendar year) with deficit of 31.0%. For the most part, the shortfall reflected copra supply tightness in the country after typhoon Yolanda battered Eastern Visayas in November last year.

All export products but oleochemicals reflected sharp cuts in volume traded during the month from respective year-ago levels. Export of coconut oil was squeezed by 61.9% to 59,950 MT from 157,170 MT and lagged sorely from the monthly average last year at 91,405 MT by 34.4%. Copra meal shipment also was slashed by 56.8% to 44,564 MT from 103,086 MT and shrank 28.9% from the monthly average last year at 62,664 MT.

Desiccated coconut was least affected among the products under review, recording a virtually flat growth (-0.7%) with outbound load at 9,559 MT from 9,626 MT and registered a minor deficiency of 1.2% from the monthly average at 9,676 MT. In contrast, oleochemicals was the only gainer with volume at 2,300 MT as copra skyrocketing from 285 MT last year, although total was 12.9% short from the monthly average at 2,641 MT. There was no reported export of copra during the month as last year.

Total export for the first quarter of 2014 (January-March) at 320,775 MT in copra terms more than halved last year figure at 655,875 MT (-51.1%). Breakdown is as follows: copra nil (23 last year), coconut oil 174,210 (379,470), copra meal 133,922 (250,046), desiccated coconut 24,670 (29,005), oleochemicals as copra 6,110 (8,675). *(UCAP Bulletin)*

DESTINATIONS OF COCONUT OIL, COPRA MEAL EXPORTS IN MARCH

Roughly one-half (46.7%) of this month shipment of coconut oil or 28,000 MT went to Europe. The United States was responsible for a slightly lower market share at 27,000 MT (45.0%) while Japan took in the remaining 4,950 MT or 8.3%.

On the other hand, Korea remained a primary market for copra meal and for this month captured more than half (50.9%) of total deliveries overseas with 22,700 MT. Vietnam followed with market share of 30.0% at offtake of 13,364 MT. Other markets were China with 4,500 MT (10.1%) and Japan 4,000 MT (9.0%). *(UCAP Bulletin)*

A RURAL STARTUP FOR TENDER COCONUT WATER EXPORTS

At a time when many startups are looking at urban centres – mainly metros – for growth, a 27-year-old entrepreneur has chosen a village called Kadambar in northern Kerala, about 45 km from Mangalore, to launch a venture.

M.M. Safwan, Managing Partner of the Kadambar-based Global Associates, is into selling tender coconut water in the global market. His product is also available in retail outlets of some major Indian towns under the brand name 'Push'.

This 'Product of India' is all set to enter Italian markets. The first export consignment of one container will set sail to Italy from Mangalore this weekend.

After completing MBA in 2010, Safwan wanted to start something of his own and came up with the idea of bottling tender coconut water.

Work on the project began in January 2012. After trials, the product was commercially launched in September 2013.

Asked why the unit took so long for commercial production, he said his company wanted to test the brand acceptability.

Being packaged in polypropylene bottles, the product is liked by the youth in some of the metros, he said. 'Push' is being sold at an MRP of Rs 30 for a 250 ml bottle with a shelf life of 12 months.

Asked why he chose Kadambar village for starting the export unit, he said the possibility of sourcing raw materials from the local markets and the availability of the property in that village prompted him to open it there.

He thought of making use of the location as the village is close to the Karnataka border.

Safwan said he could source raw materials (tender coconuts) from both sides. Added to this, he can provide jobs to some local people. As of now, 12 people are working in his unit.

Showing the unit at Kadambar village to this correspondent, he said it can process up to 2,500 tender coconuts a day.

All the tender coconuts he gets to his factory should be used, preferably before noon. Otherwise, there are chances of the water turning sour. Stale water from one coconut can also damage the entire batch of production, he said.

The unit has been set up at a cost of Rs 1.5 crore with financial assistance from Kerala Financial Corporation, he said.

For the domestic markets, he is targeting institutional sales such as hospitals and retail outlets.

Though there is no proper data on tender coconut water market, the September 2012 issue of Indian Coconut Journal says the export revenue from tender coconut water for 2010-11 was below Rs 1 crore. It went up to Rs 2 crore during 2011-12.

The journal states that coconut water is a multimillion dollar industry in the United States where it is being promoted as an alternative natural sports drink as it contains the essential electrolytes and minerals needed for rehydration.

Apart from Italy, his company is also looking at Germany and other countries.

"We are getting enquiries from some countries. There is a good demand for the product if international standards are maintained," he said. *(http://www.thehindubusinessline.com)*

COPRA SHORTAGE SENDS COCONUT OIL PRICES NORTHBOUND

With copra availability in short supply, coconut oil prices continue to sky-rocket. According to market sources, raw coconut exports to West Asian markets in large quantities have also led to copra shortage. Besides, leading corporate are buying copra at higher prices to meet their production requirements.

The demand for tender coconuts during the summer season too contributed to the copra shortage.

The coconut oil price have touched a new high of R127 per kg in Kerala and R125 in Tami Nadu markets this week. Copra rates are ruling at over R90 per kg now.

The price of the oil is likely to touch Rs150 per kg in the near future, the market sources said.

"One coconut is priced at R25 in Kerala. The availability of copra is in short supply, which in turn reflected on coconut oil prices. The packet coconut oil is priced at R150 now. The coconut availability in Tamil Nadu is also low," said K B Udayabhanu, a commodity expert in Kochi. *(ENS Economic Bureau)*

HEAT WAVE GIVES A BOOST TO TENDER COCONUT SALE

With summer peaking, tender coconut are suddenly in demand. Not even the booming aerated drink business and road side sharbat sale could douse the demand for tender coconuts. But, with the prices of tender coconut shooting up, the wholesale dealers are feeling the pinch with supply not meeting the demand."I have been in this business for the past 16 years. The sale always peaks during summer. But, the scarcity of tender coconut have forced us to increase the prices from `25 to `30 two weeks before. It was just `5 just 10 years back," says M Shafeek, a tender coconut seller near North Railway Overbridge.

As many as 100 tender coconuts are sold at each shops every day. It will double in the coming months since heat is getting worst day by day. "The rainy season had hit the business badly but demand from nearby hospitals are stable in all seasons. I have 15 regular customers," says, M Shafeek. Non-Keralites are also actively involved in this trade. "I came here with my friends from Jharkhand for construction works. But, my brother and I have also been involved in this

business for the last five months and we are earning `9,500 a month," says, M D Kurban Ansari, a vendor att Kaloor. A new idea in tender coconut sale was introduced at Pullepady Junction by Dinesh Baliga and his son Mukunthan Baliga 10 years back. The drink named 'tender coconut juice' has become a hit in the market very soon. "We mix ice and sugar with tender coconut," says, Dinesh Baliga. "I used to come here regularly because it is profitable and healthier. We will get one and half glass of juice for `35. It gives me freshness and energy than any other soft drinks," says V R Mallan, a customer here. Most of the tender coconuts are coming from Palakkad. Since the demand for coconut rises, tender coconuts are not available enough to satisfy the summer customers. Wholesale dealers are forced to import from Tamil Nadu as the demand rises. The coconut husks are taken back by the wholesale dealers and sold to households for kitchen use. There are four major wholesale dealers in the city and all of them are have been in business for over 15 years. *(http://www.newindianexpress.com)*

MINIMAL PROCESSING OF TENDER COCONUT

The taste of tender coconut water is slightly altered during processing and there are consumers who prefer tender coconut in its original taste and flavour. Minimal processing of tender coconut will yield products with the natural taste and an added shelf life. Also when the market world over prefers nature way, minimally processed tender coconut will have a very good market. The opened economy of the country has resulted in a wide array of shopping malls all over the country and minimally processed tender coconut can be placed as a premium priced products attracting the nature loving customers. FPOs can take use of such opportunities and enter into marketing retain chains. *(Indian Coconut Journal, January 2014)*

PACKAGED TENDER COCONUT

Establishment of tender coconut packing units under the auspices of Farmer Producer Organisations is essential if the coconut farmers are to benefit from the surging tender coconut water industry. There are processing technologies developed by CDB in association with research institutions for packaging of tender coconut water. CDB also extends a subsidy of 25% of the project cost subject to a maximum of RS. 50 lakhs for initiating processing units. Producer Companies can make use of this opportunity for the establishment of tender coconut processing units. Diverting a specific proportion of the coconut production for the production of tender coconut will stabilize arrivals of mature coconut in the market thereby. *(Indian Coconut Journal, January 2014)*

MARKETING OF TENDER COCONUT

Tender coconut sales is undertaken by street vendors and road side sellers in the major cities. The marketing is highly unorganized and done in an unhygienic manner. In order to promote marketing of tender coconut, CDB had initiated a scheme for providing financial assistance for initiation of tender coconut outlets which are operated in a hygienic manner. A support of 50% of the project cost subject to a maximum of Rs. 1.5 lakhs is extended for entrepreneurs, CPS and CPFs interested in initiating tender coconut retail counters. Farmer Producer Organisations have to develop a system of production based on domestic and global demand for coconut and its products and this will enable sustained development of the sector.

The attributes that are appealing the consumer to choose a product are mainly health related, natural product, medicinal values, beauty and skin care etc and tender coconut has rich properties contributing to all these attributes. In spite of its qualities, tender coconut is just not visible to us, maybe because of its commonness. Its time that we

change and use our coconuts wisely. *(Indian Coconut Journal, January 2014)*

VITA COCO CEO: 'STRONG UK RIVAL CAN HELP US BUILD £250M COCONUT WATER CATEGORY'

Vita Coco's UK CEO Giles Brook says he would welcome a strong rival to accelerate growth in coconut water and predict £75m sales for his brand in 2014.

Chatting to BeverageDaily.com, Brook, who was Innocent Drinks' UK and Ireland Commercial Manager until 2009, says there are now 39 coconut water brands on sale in the UK, but Vita Coco holds sway at the top of the coconut tree with a 91% share.

Claiming that Vita Coco is the fastest-growing non-alcoholic beverage brand in the UK – yesterday the brand announced a lemonade flavored variant of its flag product in the US, see photo below – Brook predicts that coconut water will be a £100m ($167m) UK retail category by the end of this year.

"*But over the next two three years I'd like to take it to a £250m pound sterling category, with our share being 60-70%*," Brook says, noting that 75% of Vita Coco's drinks are incremental to UK supermarket sales-so if they aren't available, consumers won't switch.

But Brook believes Vita Coco would benefit from other brands investing money in national advertising and furthering consumer understanding of coconut water's benefits.

"It's quite tough building a category. It's wrong to say we've done it on our own. But another really strong, great tasting brand investing heavily would be great for us and the category," he says.

'Slugging it out' in the States with Zico and O.N.E.

What Red Bull and have done in energy and Innocent Drinks has done in juice and smoothies, Brook wants to do in coconut water – positioned cutely as a 'lifestyle and sports drink' – and he sees massive headspace in what he calls "*the next big beverage category globally*".

"*In the US coconut water will hit $1bn in sales this year. Our share is 61% in the US, and for five years Vita Coco has been slugging it out against Coke with Zico, Pepsi with O.N.E and Naked over there*," Brook says.

"*The nearest share of any of those guys is 19%, so our share is three times bigger. It's a real endorsement of the brand that it's got such resilience, but there's no room for complacency*."

As a high quality, not-for-concentrate drink that is 100% natural, Brook says Vita Coco resonates with consumers, although he warns that cheaper offerings could harm the wider category.

Coca Café is a 'sleeping giant' – Hard launch in 2014

"*Cheaper operators with a lower value and entry point do have a role to play with certain consumers. That said, the majority of the canned coconut waters are full of added sugars preservatives, particularly sulphur dioxide*," Brook says.

"*That's just not part of our brand DNA. Look at juice as well. You can pick up something that's a tenth of the price of Tropicana, but it's all relative in terms of product integrity and quality*," he adds.

Innovation is in Vita Coco's brand DNA, Brook insists, and he identifies coconut water, coffee and milk fusion Coca Café as a "sleeping giant" that the firm will hard launch in 2014.

Coca Café drink was soft launched in 2013 with a couple of customers, and Brook says they told him it was the fastest-selling drink in their portfolios.

"*We're really going after Coca Café now – because the RTD coffee market is strong and we believe we can help accelerate that category further, with listings in at least four supermarkets this year and seven high profile national at-home chains*," Brook says.

Coffee break, Coke break, Coca Café break?

He agrees that harnessing the power of the 'coffee break' as a consumption occasion, the new brand offers hydration and energy in a healthier package, and can help make Vita Coco's core coconut water offering more mainstream.

"*With Coca Café, you're looking at breakfast, someone who wants something mid-afternoon, people who take tea or coffee breaks. Such innovations feed into these needs states*," Brook says.

"*Take Vita Coco Orange as well, with orange puree." He adds. "This targets sport, where orange-based drinks are big. But it also helps us tap into breakfast, with a drink with a more hydrating profile than juice. And Kid's takes us to a new younger demographic*."

Vita Coco Kids was launched in Waitrose this March, and other major UK listings are coming online.

Media field day on juice fuels sales

Brook says he is happy with sales well ahead of forecasts for this brand, adding that one big advantage it hasis that it is one of only a few 'schools compliant' drinks that can be sold to UK children.

"*Talking again about sleeping giants, one area that's huge for us is kids' drinks. The scrutiny on sugar levels in kids' drinks is massive, and this has 20% less sugar than leading juice and smoothie brands on the market*," he says.

Asked who Vita Coco's rivals were beyond coconut water, Brook says water drinkers are entering the category for enhanced hydration and a new taste profile, while the brand also harnesses its natural, isotonic benefits in the sports sector and speaks to health and wellness concerns generally.

"*Obviously at the moment the media is having a field day over the amount of sugar and calories in juice – we are seeing a load of consumers switch out of juice and smoothies and come to us as a healthy option*," he says.

This is because Vita Coco's non-flavored coconut water has up to 60% fewer calories than juices and smoothies, Brook adds, with 60kcal per 330ml Tetra Prisma package. *(http://www.beveragedaily.com)*

COCONUT TECHNOLOGY NEWS

DOST, MEXICO RESEARCH AGENCY FORGE AGREEMENT TO STRENGTHEN PLANT BIOTECHNOLOGY

The Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) of the Department of Science and Technology (DOST) signed recently a memorandum of understanding (MOU) with the Yucatan Center for Scientific Research (YCSR) based in Yucatan, Mexico for a joint research and development (R&D) program. Among the features of the MOU included sharing of networks and mechanisms and exchanging of scientists and researchers. The MOU brings together the two agencies as they "vowed to work together in strengthening agricultural biotechnology concerns with focus on in-vitro culture of coconut." The two parties signed the MOU at the DOST Headquarters in Bicutan, Taguig City during the exit conference of the Mexican mission to the Philippines.

PCAARRD and YCSR's cooperation will boost the efforts in the rehabilitation of the coconut industry in Eastern Visayas as they "agreed to use/share professional networks, channels, and mechanisms for improved understanding of coconut somatic embryogenesis technology through exchange of experts and scientists. Also known as the Centro de Investigacion de Yucatan, YCSR which is a public research agency aims to contribute sustainable social development by generating S&T-based knowledge in vital concerns. These include plant biochemistry and molecular biology, agricultural

biotechnology, natural resources, material science, water science, and renewable energy. *(UCAP Bulletin)*

VALUE ADDITION OF COCONUT WATER WITH FRUIT JUICES

Coconut water is a good source of intravenous fluid because of its high content of glucose and fructose. It is also used as fluid for oral rehydration. Tender coconut water and juice of plantain pith has been proved effective in treating hysteria, epilepsy and nervous insomnia. It is also an antidote against roundworm induce vomiting. Cows milk and tender nut water mix nourishes infants and children. Tender nut water is used as a remedy for vomiting, fever and jaundice. These beneficial features of tender coconut water were experimented by the Amrita School of Pharmacy, Kochi through a sponsored research of the Board. The research involves characterization of taste, anti-oxidant potential and stability of a variety of different formulations. The study was aimed at fortification of 7 month Chowghat Orange Dwarf nut water using natural ingredients containing antioxidant principles and stability studies of the fortified nut water. Biochemical analysis of the blended juices showed presence of antioxidant principles like Tannins, phenol, ascorbic acid. It was found that all formulations of guava, pomegranate and amla were able to provide at least 10% of RDA of Vitamin C and polyphenols showing value as nutraceutical.

Coconut water-blend with natural antioxidants is a promising step for the development of a nutraceutical. Pomegranate fruit extract possesses anti-diarrhoeal, antibacterial, anti-diarrhoeal, antifungal, antiulcer, antioxidant activity and free radical scavenging capability, strengthening of the immune system, prevention of heart disease and liver fibrosis and inhibition of lipid per oxidation even at lower concentrations than vitamin E. Amla is one of the richest sources of Vitamin C. Guava fruit contains a high level of antioxidant compounds, such as Vitamin C, - carotene and lycopene; and phenolic compounds, like ellagic acid and anthocyanin. The formulation of fortifying agents containing Tender Coconut Water with 10% pomegranate juice and added vitamin C and β-carotene was found to have high nutritional value, good acceptance as well as stability and antioxidant potential of four months.

Marketing of tender coconut in its natural form as minimally processed nuts after partial removal of husk through Food chain markets, hotels, IT campus and Snow Ball tender coconut (scooped out soft kernel with water inside) as food cum-beverage has acclaimed good response among tendernut lovers.

What next? A shift in outlook?

Farmers experience is often share that palms subject to tender nuts harvesting yield more nuts than those harvested at maturity. Harvesting immature nuts is beneficial; because as much as 25 percent increase in nut production has been reported. The demand for tender coconuts for drinking purpose generally increases from December April-May the summer months in a year. In most of the states the maximum yield (matured nut) is obtained during April-May. If the tender nuts are harvested from December to April-May high arrival of matured nuts/milling copra in the market during February-May can be minimalized, which will help balance the demand and supply. In a study conducted earlier in Kerala it was found that tender coconut production generates more income than inter-cropping and mixed farming.

A structural change in planting population is felt essential to popularize the usage of tender coconut. Considering the high demand for this health drink globally, it would be appropriate if harvesting of more tender nuts is encouraged through farmers' collectives. The FPOs formed under the auspices of CDB should take interest in harvesting more tender nuts and popularizing more dwarf varieties. This could be facilitated by planting 25 percent dwarf variety in the new planting and replanting programme.

The State of Kerala initiated implementation of Replanting & Rejuvenation programme (R&R) in 11 districts in which replanting of dwarfs and hybrids is envisaged in place of palms cut and removed. The estimated number of palms for removal is 180 lakhs within 2-3 years, of which minimum 50 percent need replacement. Taking 25% of this as dwarf, more than 22 lakh plant population would be tender nut yielding cultivars. Positively R&R programme will find place in the kitty of other traditional states' programme shortly. Thus in the long run country would be self sufficient in dwarf palm population. Such a cultivar mix will help augment the hybrid production programme as well, which is presently suffered due to paucity of dwarf mother palms. *(Indian Coconut Journal, January 2014)*

OTHER PACKAGING TECHNOLOGIES

The bulky nature of the tender coconut and its tendency to undergo biochemical changes and spoilage after harvesting are constraints in the popularisation and marketing of tender coconut in natural for in areas where coconut is not grown. Now technologies are available for the processing of tender coconut and matured water into packed soft drinks. The various technologies available in India are given below.

DFRL TECHNOLOGY

Defence Food Research Laboratory (DFRL), Mysore under a sponsored project of the Coconut Development Board has developed a technology for packaging of tender coconut water. Under this technology tender coconut water can be packed in PP bottles aluminum cans and retortable pouches using pasteurization technique. Since tender coconut water is highly susceptible to heating, it is subjected to minimum heating by the use of additives like nisin to achieve commercial sterility. The shelf life of the product is three months under ambient condition and six months under refrigerated condition.

ULTRAPASTEURIZATION

The objective of ultrapasteurization is similar to pasteurization but it is done at higher temperatures with shorter exposure times and extends the shelf-life to about six to eight weeks under refrigerator.

ULTRA HIGH TEMPERATURE (UHT)

Commercially sterile products are obtained by a UHT process at temperatures in the range of 265 to 295^0F (130 to 145 deg C) and holding times between 2 and 45 secs. The product is aseptically packaged after UHT processing in order to obtain a shelf stable product with a shelf life of 1 to 2 years at ambient temperatures.

FAO TECHNOLOGY

FAO has patented a technology for bottling tender coconut water and marketing it as a sports drink. The new process developed by Mr. Morton Satin, Chief of FAO's Agriculture Industries and Post Harvest Management Service uses microfiltration technology in which the water is modified to approximate the vitamins and energy content of major sports drinks. The UK has granted a patent to the FAO on this technology.

GERMAN TECHNOLOGY

Spray Evaporation Technique (SET) is adopted in this technology. It is a technology used for separating clear from any liquid. The special advantage of this technique is that the product retains all its original characteristics such as retention of vitamins and minerals, aroma, colour, taste, etc. which is not possible in the conventional methods. The technique was developed and patented by Winter Umwelttechnik of Germany. The concentrated tender coconut water has a shelf life varying from six months to 24 months depending upon the degree of concentration. *(Indian Coconut Journal, January 2014)*

TECNOLOGIES FOR PRODUCTION AND PRESERVATION OF COCONUT NEERA

Coconut sap (Neera) is a sweet juice or sap, obtained by tapping the unopened spadix of the coconut palm. The tapping involves the

collection of exuded sap from the inflorescence that yields sweet sap. Tapping methods vary from country to country and even within the country. Neera is obtained from the coconut palm by tapping the unopened spadix. In the tapping, the spathe is beaten and the cells are ruptured in order to stimulate a flow of juice which is called Neera. There is a considerable variation in the yield of Neera from day to day, season to season, spadix to spadix and tree to tree. It is reported that a spadix will yield toddy for 27 to 37 days. In India, the spathe is considered ready for tapping when the mature one bursts or is just about to burst. The female flower within the unopened spadix causes a swelling at the base and its appearance indicates the appropriate stage for tapping. The yield of sap gradually increases and when it reaches the maximum, the collection is made twice in a day. The flow of the sap from the inflorescence continues for about one month or even more. During this period, the second spathe is also brought into production.

The tapping is usually continued for a period of six months with a possibility of three spathes on the same tree being tapped at the same time. The maximum yield of Neera is usually obtained in the third month after the commencement of tapping.

Neera is rich in carbohydrates with sucrose as its main constituent and has a specific gravity of 1.058-1.077. Other constituents of Neera are: Total solids (g/100 ml): 15.2-19.7; Sucrose (g/100 ml): 12.3-17.4; Total ash (g/100 ml): 0.11-0.41; Protein (g/100 ml): 0.23-0.32; Ascorbic acid (mg/100 ml): 16-30.

Preservation and processing of Neera require a suitable technology, since it is highly susceptible to fermentation. The various technologies available for processing and preservation of neera in difference types of consumer packs are given below.

DRDO Technology

The Defence Research Development Organization (DRDO) has developed a technology for processing and preservation of Neera in its natural form. The technology helps to retain the vitamins, sugar and other nutrients beneficial for health. Heat preservation methods such as pasteurization and sterilization are adopted to preserve and extend the shelf life of the product. Temperature requirement for thermal processing of Neera was found to be more than 95^0C. Thermal stress could be reduced by the addition of bio-preservative both for in-pack pasteurization and retort processing. Neera is highly photosensitive due to the presence of ascorbic acid, hence foil-based multi-layer packaging material such as PET/aluminium foil/cast pp was found suitable to prevent the adverse effect of light. In order to increase the product appeal, the suspended particles in Neera were removed by centrifugation. When the product was processed either by in-pack pasteurization or through retort pouch processing, the shelf life was about three months under refrigerated condition and 30 days under ambient conditions.

KAU Technology

The technology adopted by KAU for preservation of neera involves the following steps:

The raw neera tapped and collected in plastic cans is brought to the processing site in chilled condition in ice boxes and collected in chilled tanks. The chilled neera is then treated with a preservative and filtered using a centrifuge. The filtered neera is then packed in pet bottles. The packed neera using this technology has a shelf life of about two weeks under refrigerated conditions.

CDB Technology

The Coconut Development Board has developed a new technology for collection and processing of coconut neera in hygienic conditions without the application of lime. The technique involves cleaning the spadix initially with a disinfectant and further washing using distilled water. The neera tapped in hygienic condition is collected in HDPE cans with prior application of anti ferment agent. Neera has to be prevented from fermentation during the

process of harvesting and transportation. Even slightly fermented Neera cannot be used for processing in any form. Neera has the natural tendency to ferment and this has to be arrested by addition of some preservative or yeast inhibitors. Addition of FSSAI approved yeast inhibitors has been used for this purpose. Sterile handling of inflorescence and vessels are very important in the effectiveness of preservatives. The process standardized for preservation and packing of neera involves the following steps: Collection of sap using anti ferment agent-Filtration using centrifuge-Preservation using permitted preservatives & Chilling to 4^0C-Deodorization using activated carbon/bentonite-Pasteurization at 80^0C using batch type pasteurizers-Cooling to 55^0C-Filling in pet bottles/pp bottles using automatic filling machine-Cap sealing using induction sealing machine.

Coconut neera produced through the above process would have a shelf life of six months under refrigerated conditions and three months under ambient conditions. *(Indian Coconut Journal, February 2014)*

WATCH OUT FOR INFLAMMATORY FOODS

Inflammation has been clearly identified as the key culprit in many chronic diseases that kill millions of people every year, including heart disease and cancer.

According to the World Health Organization (WHO), cardiovascular disease caused an estimated 17.3 million deaths in 2008, while cancer caused 7.6 million deaths in the same year. Millions more people live with the debilitating effects of these diseases.

Inflammation at the cellular level is also implicated in premature ageing, food allergies and asthma.

However, research now shows that the risk of heart disease, cancer and premature ageing can be modified with lifestyle changes, particularly to the diet. The foods we eat have pro- or anti-inflammatory properties and can promote or prevent inflammation in the body.

Sugars

Sugar, found in so many of the processed foods and beverages that are prevalent in our diet today, is an inflammatory compound that increases the risk of obesity, type 2 diabetes and the metabolic syndrome.

Our major sources of sugar are sugar-sweetened beverages like soft drinks and fruit juices, pastries, cakes, candies, chocolates and desserts.

When buying processed foods, check the sugar content on the food labels. They may appear under various names like corn syrup, dextrose, fructose, golden syrup, maltose, sorghum syrup and sucrose.

You can still delight your sweet tooth by eating foods and snacks with natural sugars, not added sugars. Eat fresh or dried fruits like dates, figs, persimmons, kiwis, tangerines and various types of berries. Use natural sweeteners like honey, stevia or blackstrap molasses.

Refined grains

Refined grains have had all the goodness removed from them, such as fibre and vitamin B, and they end up only providing calories. Just like refined sugars, refined grains may promote the onset of cancer, diabetes and coronary disease if consumed excessively.

White rice, white flour, white bread, noodles, pasta, biscuits, cereals and pastries are the most common sources of refined grains. Try to cut down on these and eat more unpolished and unrefined grains.

Dairy products

Although we would like to believe that milk is good for us, it can be a poor food choice for people who cannot digest dairy products. As much as 60% of the world's population cannot digest milk because it is not the norm to be able to digest milk once past infancy.

Dairy produces an inflammatory response in those who are intolerant, including stomach discomfort, constipation,

diarrhoea, skin rashes, acne, hives and breathing difficulties in susceptible people.

Dairy products do not only include milk, yoghurt and cheese, but also foods with hidden dairy content such as bread, cookies, crackers, cakes, cream sauces and cereals. The presence of milk or dairy will be listed in the ingredients list of the product label.

Alternatives for milk and dairy products are kefir and unsweetened yoghurt, which are more easily broken down in the stomach.

Common vegetable cooking oils

The ratio of omega-6 to omega-3 fatty acids in our diet can affect the level of inflammation in the body. If you consume a lot of common vegetable oils like grapeseed, cottonseed, safflower, corn and sunflower oils, you will have too much omega-6 compared to omega-3, which promotes inflammation.

You should be aware that you could consume these oils not only from home-cooked food, but also in hawker stalls, restaurants and from processed foods.

As much as possible, replace these omega-6-rich oils with other types of oils that have a more balanced omega-6 to omega-3 ratio (if possible, one-to-one), such as macadamia oil or extra virgin olive oil. Cut down on eating or buying outside food.

Trans fats

You probably already know about trans fatty acids and their detrimental effects on heart health. Trans fats increase LDL ("bad") cholesterol in the body while reducing HDL ("good") cholesterol.

But trans fats also promote inflammation and insulin resistance, further increasing the risk of heart disease and metabolic syndrome.

Trans fats can be found in any foods prepared using partially hydrogenated vegetable oil, margerine and/or vegetable shortening. These are usually deep-fried foods, fast foods and commercially-baked goods.

To reduce your intake of trans fats, avoid eating deep-fried foods and fast foods prepared outside. Choose processed foods that do not contain partially hydrogenated vegetable oils or vegetable shortening in the ingredients list.

Feedlot farm animals

Remember the pro-inflammatory high omega-6, low omega-3 ratio? Animals bred on feedlot farms are fed this type of pro-inflammatory diet, consisting of grains like soybeans and corn.

These animals are raised in cramped environments, making them highly sedentary and fat. They are also injected with hormones and antibiotics so that they grow faster and do not fall ill.

Instead of eating meat from these feedlot-bred animals, choose organic, free-range meat instead. These animals are fed grass and can roam freely, so they contain higher levels of omega-3 and less saturated fats.

Red meat and processed meat

Lovers of steak, pork and lamb chops beware: red meat has been found to contain a molecule called Neu5Gc that stimulates an immune response from the body after it is eaten. The immune response may trigger a low-grade, chronic inflammatory response that has been linked to cancer and heart disease.

Those who love eating sausages, ham, salami and burgers are also in trouble. The World Cancer Research Fund and the American Institute for Cancer Research has found that processed meats that have been smoked, cured, salted or chemically preserved are possibly a cause of colon, rectal, oesophageal and lung cancer.

Cut down on your red meat intake to once a week and eat more organic vegetables, poultry and fish. Avoid processed meats as much as possible.

Alcohol

Drinking alcohol on a regular basis can increase inflammation in the body, especially

to the oesophagus, larynx and liver. This could eventually lead to tumour growth in these sites and cause cancer.

Instead of alcohol, just drink plain water or green tea, which anti-oxidant and anti-inflammatory properties. Limit alcohol to no more than one drink per day.

Artificial food additives

Artificial sweeteners like aspartame and seasoning like monosodium glutamate (MSG) are believed to trigger inflammatory responses, particularly in people who are already suffering from inflammatory diseases like rheumatoid arthritis.

These food additives can be found in pre-packaged foods or food prepared in hawker stalls and restaurants. You can either reduce your intake of these foods or ask for "no MSG" when ordering food. If you must use any food additives, choose natural ones like herbs, spices or natural sweeteners.

This is not an exhaustive list of inflammatory foods, but you can use it as a guide to start eating a healthier diet. Some people may have an inflammatory response to other types of foods that they are sensitive to, such as gluten, nuts or eggs.

Pay more attention to your body and any symptoms that may occur and look at what food you may have eaten to trigger that response. If you feel better from having avoided that food for about two weeks, then it is probably the culprit.

The food could be something perfectly "normal" that you have been eating all along, and the symptoms could be as benign as headaches or tiredness. But imagine how much better you will feel if you eliminate the cause of these symptoms. *(The Jakarta Post, 22 April 2014)*

COCONUT OIL UNDER FOOD SAFETY SCANNER

Officials of state's food safety enforcement wing are busy this summer. In the midst of drive against artificial ripening of mangoes and unhygienic roadside eateries, the department has also started checking for adulteration of coconut oil. Special inspection drive has begun at check points to prevent transportation of adulterated coconut oil from Tamil Nadu.

Food safety commission in charge K Anil Kumar said the drive had been part of department's continuing efforts to prevent adulteration. "Most commonly used adulterants are paraffin wax and white oil. Only products with NABL accreditation are allowed in the state. We have already seized oil from check post and samples have been sent to laboratory of coconut development board and government analytical laboratory for analysis," he said.

Unfortunately, most of the laboratories in the state are not equipped to check all types of adulteration. In some cases, palm kernel oil is used as adulterant. If 5% of palm kernel oil is used, it cannot be identified in usual lab tests and will require sophisticated testing," said an official.

Meanwhile, state food safety officials have contacted food safety commission rates in Tamil Nadu and Karnataka to check adulteration practices in those states. Most of the coconut oil that reaches the state comes from Kangeyam in Tamil Nadu. *(http://epaper.timesofindia.com)*

COCONUT DUST FOR GERMINATING STRONGER SEEDS

A team of scientists led by an Indian-American at a prestigious American university has introduced a technique of using coconut dust for germinating seeds that improves soil quality for plants to take stronger roots.

Scientists at the Virginia Tech have developed the technique for farmers in Kerala, which can be used as a great potting soil for seedlings, the university said.

Coconut dust provides an ideal medium in which to grow young seedlings until they are ready to be transplanted. Their lightweight cellulosic structure allows the roots of a seed to establish themselves and at the same time absorb just the right amount of water, it said in a statement.

Furthermore, when "coco-peat" is added to soil, it improves the soil's texture and structure. Sandy soil becomes more compact, and clayey soil becomes more arable. Plus the medium is more likely to be free from bacteria and fungi, it said. The university's Integrated Pest Management Innovation Lab, funded by the US Agency for International Development, began working with universities in India on this project seven years ago.

At that time, scientists introduced the technique of using coconut dust in seedling trays to germinate seeds. *(http://articles.economictimes.indiatimes.com)*

CARING FOR INDOOR COCONUT PALM: TIPS

Coconut palms are native to the tropical places in the world, present rather like tall sentinels on sandy beaches. This palm and its fruit are beloved by many people across the world.

You love your coconut and would like to grow one. But, you do not live anywhere in the tropics or do not have any garden to speak of to do so. Then, what do you do? Well, plant it indoors of course! This might sound a little crazy and farfetched. But, it is possible to grow coconut palms indoors, just do not expect them to grow to their normal height of 100m or near.

Gardening Tips for Hot Weather

Having a coconut palm growing in your living room will catapult you to the top of the neighbourhood gossip list. Towards looking after coconut palm properly there are several things you should observe starting from purchasing a seedling.

For the avid fans of this tall and slim beauty we describe various techniques for looking after a coconut plant.

Choose the best: When you decide to plant a coconut palm indoors, the first step towards looking after coconut palm properly is to buy the healthiest variety of the palm for this purpose. It will better withstand the restrictions indoors.

Re-potting and soil quality: Just because the coconut plant is so huge, you do not need a pot of similar proportions. Its root is quite small and looking after coconut palm involves planting them in a well drained sandy soil.

Sunlight: Being a tropical plant, the coconut palm is used to a lot of sunlight. For looking after coconut palm indoors, you need to ensure that it is properly exposed to natural sunlight, directly or indirectly.

Control humidity: Humidity is one of the major problems faced while looking after coconut plants indoors. These plants are used to a high level of humidity in their natural habitats and you need to ensure as high humidity inside as possible.

The heat of the tropics: Usually heating is not a problem while looking after coconut plants inside your house. But, you need to take care that too much dry heat may damage the plant. Do not place it in front of heaters or air conditioners.

Watering: While looking after coconut plants inside you may not forget to water the palms regularly. But, you must take care that the soil it is planted in is well drained, so that the coconut plant does not rot in too wet soil.

Leaching: A regular watering schedule while looking after coconut plant will lead to accumulated salt in the soil, even if you use distilled water. So leaching the palm every 3 months is recommended to wash out the salt content in the soil.

Fertilization: Proper fertilization is essential for the healthy growth of the tree, no matter whether you are looking after coconut plant indoors or outside. But, indoor palms require less fertilizing than the outdoor ones and take care not to overdo fertilizing.

Air circulation: When looking after coconut plants indoors, ensuring a good air flow all the time is definitely a challenge. Place the palm in a ventilated room and periodically take it outside for some time, perhaps on a weekly basis. *(http://www.boldsky.com/home-n-garden)*

BIO-DIESEL NEWS

INDONESIA - BIODIESEL MIX MISSES QUARTERLY TARGET

The amount of biodiesel blended into diesel fuel during the January-March period was nowhere near the quarterly target as poor infrastructure and a prolonged procurement tender had gotten in the way.

Only 350,000 kiloliters of biodiesel were blended into diesel fuel during that period — far below a quarter of the government's full-year target of 4 million kl, Energy and Mineral Resources Ministry Director for bio-energy Dadan Kusdiana said on Monday.

"That number is equal to savings of US$237 million in foreign exchange reserves," Dadan said.

The government began requiring diesel for industry and transportation to contain 10 percent biofuel in September last year as part of an attempt to reduce oil imports and ultimately reduce the gap in the country's current account.

Last year, the mandatory biodiesel blending requirement helped lower diesel fuel imports by 1.05 million kl worth $831 million.

This year's total will include the blending of 1.64 million kl of biodiesel into subsidized diesel fuel, 808,000 kl into diesel fuel for power generation and 1.57 million kl into diesel fuel for industrial use.

The total blending is expected to save up to $3.1 billion in the country's foreign exchange reserves this year.

The Ministry's renewable energy director general Rida Mulyana attributed the low realization of biodiesel usage to delayed biodiesel procurement tenders by PT Pertamina and PT PLN as well as a lack of blending facilities particularly in the eastern part of Indonesia.

"Tenders are targeted to be completed in May or June so that we can get back on track to achieve the target for the second half," he said.

Rida admitted that the government would likely miss the target of blending 4 million kl of biodiesel this year, given no significant infrastructure and procurement progress taking place in the first six months.

Earlier this year, state-owned oil and gas giant Pertamina — the country's main distributor of the petroleum product — said it had secured a supply of 2.4 million kl or only 45 percent of the fatty acid methyl ester (FAME) needed for the mandatory blending for this year and next year.

The figure was lower than the company's need of 5.3 million kl of FAME for this year and next year after tenders to procure the item offered held last year.

Pricing scheme was one of the main issues that caused the state company to fail at procuring the product as targeted.

Biodiesel producers have been calling for the company to set pricing terms above the benchmark of fuel pricing, which is the Mean of Platts Singapore (MOPS), to make the procurement more attractive.

Pertamina is currently working on other tenders to look for 850,000 kl of FAME per year to be blended with diesel fuel to be distributed to Sumatra, Nusa Tenggara, Kalimantan, Sulawesi and Papua areas.

Apart from Pertamina, state-owned electricity firm PT PLN is also working on auctions for the procurement of 123,000 kl of processed palm oil (PPO) to feed its power plants to help reduce the company's oil consumption. *(The Jakarta Post, 22 April 2014)*

SOYA AND SORGHUM PROMISING CROP OPTIONS FOR BIOFUELS - STUDY

The Water Research Commission in South Africa is expected to recommend sorghum and soybeans as the preferred crops to grow for biofuels. The recommendation follows a detailed evaluation of 20 crops with potential to be grown as biofuels and blended

with conventional fuels to meet at least 2 percent of petrol and diesel demand as of October next year. The study, funded by the commission, is being done by the Centre of Water Resources Research at the University of KwaZuLu-Natal, the Council for Scientific and Industrial Research, and the University of Pretoria.

The researchers evaluated trees and crops, including canola, cassava, Jatropha, sweet sorghum, soybean, sugar beet and sunflowers. Sugar cane was excluded as it had already been studied. During the commission's study, maize was eliminated because of concerns around food security, while Jatropha (an oil rich plant species found mainly in the Americas) had raised concern because of its potential to become invasive. Although the final recommendations have not been made, the commission's *Water Wheel* magazine reported that sorghum and soybeans were found to be among the more promising options for biofuel production in dry land farming. *(UCAP Bulletin)*

OTHER VEGEOIL NEWS

NON-GMO AND 'CANOLA FACTOR' TO DRIVE SUNFLOWER OILS MARKET

Oilseeds International said the sunflower oil market will saturate in the next five years, fueled by the step away from GMO oils and canola. Snack and food manufacturers have moved away from genetically modified oils, replacing them with a variety of non-GMO certified oils. But the high oleic value and positive label attributes of sunflower oil make it a preferred choice among many, claimed Tony Intal, sales representative of Oilseeds International, a leading supplier of specialty vegetable oils to nutritional product, natural food, and premium snack food companies in North and South America and Europe.

Intal said manufacturers also wanted to shift away from GMO oils and steer clear of canola, an oil viewed negatively among many consumers in the US. "Even though there is non-GMO canola oil, they still want nothing that can have that 'canola effect' or 'soybean effect'. When it comes to concerns over canola oil, most of it is just aesthetics, labeling and marketing," he said. Manufacturers wanted labels that would appeal to consumers but also oils that boasted high oleic (monounsaturated) acid values, two big factors, according to Intal, that they are looking for. *(UCAP Bulletin)*

DID YOU KNOW……

RESEARCH SHOWS VIRGIN COCONUT OIL IN MELT ORGANIC'S PERFECT BLEND SUPPORTS HEALTHY WEIGHT

Eating MELT Organic's Perfect Blend of healthy oils, featuring organic virgin coconut oil, supports healthy weight when replacing butter or traditional cooking oils in your daily diet. Organic virgin coconut oil is possibly the healthiest, most versatile, unprocessed dietary oil because it is the most abundant source of lauric acid. Many consumers have discovered the health benefits of cooking with virgin coconut oil instead of traditional cooking oils.

"Maintaining a healthy weight begins with making better choices every day," says MELT Organic CEO, Meg Carlson. "Simply replacing butter and traditional cooking oils with MELT Organic spreads for baking, cooking and spreading is a great start. MELT is far more versatile than pure virgin coconut oil and tastes great spread on your morning toast, bagel or toaster waffle.

Peer-reviewed studies are revealing that unprocessed, non-hydrogenated virgin coconut oil has emerged as a functional food, particularly when combined with healthy oils high in Omega 3s that are not genetically modified. Extensive dietary research indicates eating organic virgin coconut oil may boost metabolism, increase thyroid activity, promote weight loss, and provide optimal nutrient absorption. Each variety of MELT Organic

features the Perfect Blend made from the healthiest fruit- and plant-based organic oils: virgin coconut, palm fruit, flaxseed, sunflower and canola. MELT Organic's creamy blend of these oils provides the ideal 2:1 balance of Omega-6s to Omega-3s.

MELT is now available in more than 5,400 stores in North America. Rich & Creamy MELT Organic, Honey MELT Organic and Chocolate MELT Organic are sold in 13-ounce packages, with 80 calories and 9g of fat per serving. MSRP is $4.99 for all varieties. Visit MELT Organic for tips and recipes for baking healthy treats with MELT Organic Spreads.

About MELT Organic

Say Goodbye to Butter, Say Hello to MELT! MELT Organic is a line of luscious, all-natural spreads for butter lovers seeking a healthier alternative. Available in original, honey and new chocolate flavors, MELT Organic is made from the perfect blend of the healthiest fruit- and plant-based organic oils: virgin coconut, flaxseed, hi-oleic sunflower, palm fruit, and canola. MELT Organic spreads sizzle, drizzle, saute, and bake just like butter, but with half the saturated fat and fewer calories. Each variety is certified organic, kosher and made with non-GMO, eco-social and fair trade ingredients, while also trans-fat free, gluten free, dairy or lactose free, and soy free. Only MELT uses virgin coconut oil that is certified Fair for Life Fair Trade and Rainforest Alliance certified Palm Fruit Oil. The entire MELT Organic line is the first in North America to be Non-GMO Project Verified. The line is also the first to be sold in innovative square packages for easy storage and sustainability . . . It's Hip to Be Square! For more information and recipes, visit http://www.MELTorganic.com, http://www.facebook.com/MELTorganic or http://www.twitter.com/MELTorganic.

About Prosperity Organic Foods, Inc.

Based in Boise, Idaho, Prosperity Organic Foods, Inc., the parent company of MELT Organic, provides great tasting products of superior quality through innovative uses of healthy fats and oils that allow consumers to eat better, feel better and live better. Rich & Creamy MELT Organic, which launched in 2011, is the company's debut product. MELT, At Last, Good Fat! Say Goodbye to Butter! Butter 2.0, and Weight Smart are registered trademarks of Prosperity Organic Foods, Inc. All rights reserved. *(http://world.einnews.com)*

COCONUT RECIPE

"Coconut Burfi"

Ingredients:

- 350g Coconut gratings
- 225g White sugar
- 5g Cardamom powder
- 20 nos. Cashew nut
- 30g Ghee

Preparation:

1. Grind the coconut gratings and the cashew nuts together without adding water.
2. Mix sugar with 100ml or water in a pan and heat over a slow flame till a thick syrup is formed that can be drawn into strings.
3. Add the ground mixture to this syrup and turn over constantly till the blend thickens a bit.
4. Add ghee and cardamom powder to the blend and continue heating and turning over till the blend forms a lump and does not stick to the bottom of the pan.
5. Remove from the flame and spread the lump evenly to a thickness of 2cm on a ghee smeared flat wooden board.
6. Cut in to pieces of desired size and shape when still warm using a spatula.
7. When cool, separate the pieces and warp each piece with wax paper and store in suitable containers. *(Coconut*

Based Recipes from India, Indonesia, Philippines, and Thailand)

BUSINESS OPPORTUNITIES

❖ **DESICCATED COCONUT**

An established desiccated coconut factory in Medan Indonesia looking for an experienced factory manager. He/she will manage all the production process. Should have knowledge and understanding of good manufacturing practice. For further information please contact:
Mr. Budi Karim
Indonesia
Email: budika10@yahoo.com

❖ **COPRA**

We are coconut trader from India urgently looking for exporter who are willing to supply us copra and mature coconuts from Indonesia. For detail on price and volume please contact:
Email: jreximtraders@gmail.com

❖ **COCONUT**

I am a coconut importer from Thailand want to buy in large quantity and on regular basis of mature coconut from Indonesia. To start I am ready to buy up to 2 million mature coconuts. Any interest parties please kindly contact:
Email: rbworldwidecommodities@gmail.com

❖ **ACTIVATED CHARCOAL**

Looking for supplier of small scale equipment to make activated charcoal from coconut shell charcoal. Interest party may contact:
Rev. Vernon Smith Ph.D. J.P.
General Manager
Coconut Bio-Energy
Honiara, Solomon Islands
Tel: 677-39933
Email: revvernonsmith@gmail.com
coconutbioenergy@gmail.com

❖ **VIRGIN COCONUT OIL**

The manufacturer of vegetable oils based in Genoa - Italy are looking for supplier who can supply us 20 tons of organic virgin coconut oil. For details please contact:
Mr. Paolo Lavagetto.
Parodi Nutra S.r.l.
Via Valverde 146
16014 Campomorone (GE)
Italy
Email: paolo.lavagetto@parodinutra.com

❖ **CRUDE COCONUT OIL**

Manna Pacific based in Port Villa - Vanuatu need to buy 200 MT per month of CCNO (crude coconut oil) 4% FFA max. Any interest party please forward your best quotation (FOB or CIF) to:
Ms. Anna Spooner
Port Vila, Vanuatu
Email: mannapacificmanager@gmail.com

❖ **COCONUT OIL**

Producer of coconut oil under the brand Arrow from Padang, West Sumatera ready to supply retail or bulk of coconut oil. For price please contact:
Ms. Yunita
Padang, West Sumatera
Indonesia
Tel: 62-751-22526
Email: lembahkrya@yahoo.co.id

❖ **COIR FIBRE**

Coir fiber industry in Riau Indonesia need to expand the business and urgently need door mat processing machinery. For interest coir fiber machinery manufacturer please provide us price and other technical details through ady_ip73@yahoo.com

❖ **VIRGIN COCONUT OIL AND SOAP**

FSM soap available for sale. FSMCDA not only produces copra but also produces virgin coconut oil and soap-based virgin coconut oil. Their products are ready for export. Interest party may contact:

Mr. Peterson Sam
General Manager or
Mr. Eddie Parce
Production Manager
FSM Coconut Development Authority
P.O. Box. 297
Kolonia, Pohnpei
Federated States of Micronesia
Tel: (691) 3202892
Fax: (691) 3205383
Email: fsmcda@gmail.com
edpart_59@yahoo.com

❖ **BROWN COCONUT SUGAR AND NATA DE COCO**

Community group in Sidamulya District of South Lampung Regency Indonesia ready to supply in regular basis brown coconut sugar and Nata de Coco. For detail of price and volume of supply please contact:
Mr. Aan Kurniawan
Head
Sidamulya Village
South Lampung, Indonesia
Mobile: 62-8137900096
Email through: apcc@indo.net.id

❖ **COCONUT SHELL CHARCOAL**

Activated carbon factory in Tamil Nadu, India is looking for supplier of big quantity of good quality of coconut shell charcoal from different coconut producing countries. Please contact for price and details:
Mrs. Rajani
Sales and Marketing Manager
Kavin Carbon
Tamil Nadu, India
Tel: +918939702926
Email: rajani@kavincarbon.in
Skype: rajani.kavincarbon
Website: www.thegreencocoisland.net

❖ **VCO AND VCO PRODUCTS**

VCO produced by drying and pressing method with certified GMP, HACCP, ISO etc. is available for export. VCO-based cosmetic and toiletry products are available for sale. Importers/distributors may contact:
Mr. Suradej Ninek
Tropicana Oil Co., Ltd.
35/9 M.4 Khunkeaw, Nakhonchaisri
Nakhonpathom 73120
Thailand
Mobile: (66-84-1605355
Tel: (67-34) 32683-36
Fax: (66-34) 326837
Email: info@tropicanaoil.com
suradej@tropicanaoil.com
Website: www.tropicanaoil.com

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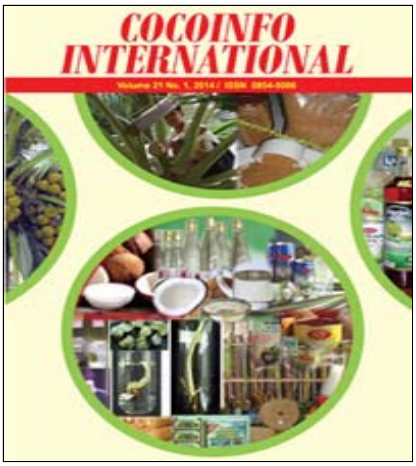

Price including postage:
- US$35 (APCC Member Countries)
- US$40 (Non-APCC Member

Price including postage:
- US$40 (APCC Member Countries)
- US$45 (Non-APCC Member

STATISTICS

Table 1. Indonesia's Monthly Exports of Coconut Oil (in MT), 2011-2013

Month	2011		2012		2013	
	Volume (MT)	Value (FOB) US$'000	Volume (MT)	Value (FOB) US$'000	Volume (MT)	Value(FOB) US$'000
January	34,804	54,158	125,613	194,897	68,002	51,623
February	39,617	73,852	54,759	73,791	46,040	35,465
March	35,356	66,726	66,110	86,329	44,708	35,050
April	96,336	179,891	96,812	124,847	36,060	27,429
May	43,301	68,913	61,917	78,921	64,247	48,713
June	31,023	60,819	67,343	75,375	35,589	27,283
July	55,047	98,875	37,292	37,219	78,250	61,103
August	35,856	59,524	45,757	46,678	23,427	18,827
September	29,346	48,949	39,536	36,501	54,076	44,783
October	45,,834	64,540	67,040	80,290	39,193	35,840
November	43,449	52,703	31,787	27,449	72,356	67,998
December	79,832	108,805	31,956	24,536	68,619	73,422
Total	**569,801**	**937,755**	**725,922**	**886,836**	**630,567**	**527,536**

Source: Indonesian Central Bureau of Statistic, 2013

Table 2. Philippines's Monthly Exports of Coconut Oil (in MT), 2009-2013

Month	2009	2010	2011	2012	2013
January	24,579	146,971	103,074	63,517	115,186
February	36,195	74,578	67,825	42,854	61,899
March	44,620	133,675	89,110	63,649	142,991
April	32,080	130,402	97,614	58,900	99,070
May	55,555	130,921	58,743	70,680	110,106
June	82,130	106,018	32,337	79,750	102,404
July	106,014	145,564	43,011	92,600	115,104
August	63,000	99,364	32,099	82,325	65,870
September	93,882	86,800	47,970	71,922	69,980
October	112,159	109,540	69,400	80,380	71,661
November	51,358	67,709	33,100	45,060	82,126
December	124,666	49,718	32,250	30,000	88,389
Total	**826,238**	**1,281,260**	**706,533**	**781,637**	**1,124,786**

Source: United Coconut Associations of the Philippines, 2013

Table 3. International Prices of Selected Oils, 2011-2013 (US$/MT)

Month Years	Coconut Phil/Indo CIF. Rott.	Soybean Oil Dutch FOB ex-mill	Palm Oil Malaysian CIF Eur.	Palm Kernel Oil CIF. Rott.	Sunflower Oil EU Fob. NW. EU
2011					
January	2,038	1,374	1,281	2,120	1,373
February	2,278	1,407	1,330	2,301	1,385
March	1,925	1,307	1,180	1,977	1,389
April	2,089	1,315	1,149	1,899	1,405
May	2,097	1,294	1,159	1,958	1,411
June	1,803	1,324	1,133	1,765	1,461
July	1,645	1,341	1,092	1,360	1,425
August	1,523	1,345	1,090	1,377	1,435
September	1,305	1,305	1,056	1,268	1,203
October	1,208	1,220	994	1,085	1,120
November	1,208	1,479	1,053	1,298	1,248
December	1,445	1,204	1,027	1,367	1,190
2012					
January	1,451	1,218	1,061	1,366	1,208
February	1,411	1,255	1,106	1,362	1,249
March	1,359	1,282	1,152	1,377	1,258
April	1,348	1,310	1,181	1,395	1,324
May	1,155	1,218	1,085	1,239	1,275
June	1,058	1,180	999	1,093	1,192
July	1,087	1,243	1,020	1,086	1,262
August	994	1,180	993	988	1,300
September	978	1,319	997	996	1,320
October	905	1,179	850	882	1,244
November	820	1,150	790	800	1,243
December	768	1,174	770	817	1,268
2013					
January	840	1,101	850	780	1,269
February	867	1,194	855	850	1,275
March	815	1,119	848	830	1,221
April	800	1,101	843	828	1,201
May	818	1,083	838	818	1,227
June	912	1,082	845	820	1,228
July	874	1,003	835	840	1,178
August	866	965	803	818	974
September	926	1,013	822	914	980
October	945	968	846	900	987
November	1,009	1,191	920	1,060	1,003
December	1,268	995	911	1,150	977

Source: Oil World, 2013

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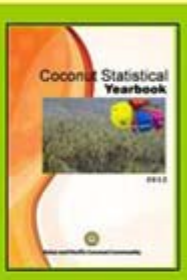

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