INSIDE

THEME

2012-13 An year of accomplishments

Let us outshine our past in 2013-14

Dear Coconut Farmers,

This issue of the Indian Coconut Journal is for taking stock of the activities and programmes of the Board during last year. It is vital to monitor and review various programmes implemented by the Board during last financial year and to assess how the farmers benefited out of them. Board carried out many developmental programmes during 2012-13, which was the initial year of 12th Five Year Plan period. We should analyse both the successes and shortfalls before stepping to the current year. Retrospection is imperative for the successful implementation of various programmes. This will enable better implementation of projects in future and this issue of the journal is an attempt towards the same.

Coconut Development Board actively intervened in the problems of farmers many a times and its frequent contacts and representation with both the central and state governments resulted in many favourable stands to help out coconut farmers. Instead of just taking stock of the figures and facts, the qualitative achievements of the various programmes implemented is to be evaluated. During 2012-13, we seriously thought of increasing the involvement of farmers in various programmes. Coconut Producers Societies (CPS), Coconut Producers Federations (CPF) and Producer Companies (PC) are the first step towards ensuring better prospects to coconut sector. CDB has to go ahead with an effective team work with farmers and agriculture departments of various state governments. We have to create successful models through the creative intervention of farmer collectives in various issues confronting coconut sector.

Board bestowed much attention on seedling production in association with farmers and their producer organisations. Apart from the already approved projects, Board also promptly implemented the formation of CPSs and CPFs and the PCs. FOCT programme reached at newer heights. It is worth mentioning here that the Replanting and Rejuvenation programme could utilize 99% of the budget allocation by September 2012 itself. For mobilizing more resources, Board worked in association with various central and state sector schemes. An attempt was made for the convergence of ideas and resources in coconut sector. State governments have come forward to form Farmer Producers Organizations on large scale and budget provision has been earmarked for the same. Board considers this as a recognition from the central government for its effective functioning.

Last year, Board concentrated mainly on forming maximum CPSs and strengthening and accelerating them with leadership trainings and mentoring and moved ahead with federating the CPSs to CPFs and finally to form the Producer Companies at the apex level. At the same time, Board made relentless efforts for extending the Replanting and Rejuvenation programme to entire Kerala as well as the other traditional coconut growing states. Government of India has made budgetary provision for extending this pilot project to the remaining districts of Kerala. This is also considered as a recognition to the successful implementation of the pilot project. Support rendered by various state governments and elected representatives of people for this achievement is duly acknowledged with gratitude.

Board in association with the farmer collectives acted as a catalyst in the policy formulations in coconut processing and marketing front of Kerala and the neighbouring states. Board made concerted efforts with government of Kerala to take out Neera from the purview of Abkari act and to classify this non alcoholic juice as an agriculture product. It is a positive outcome that Government of Kerala has constituted a committee for taking stock of the various issues in neera production and the report of the committee is awaited. Neera being a non alcoholic mineral rich and nutritious health drink extracted by tapping the immature inflorescence of coconut palm, it should be brought out of the Abkari act. The technological advancements made in processing and packaging of neera ensures that it can be maintained as a zero alcohol drink. Hence necessary amendments in the Abkari act is the need of the hour.

During last year, even though copra procurement was not as successful as expected, nearly 60 CPSs

came forward to procure copra. It is also expected that the government of Kerala initiative to procure dehusked matured coconut will boost the future functioning of CPSs. Similar type of support from other major coconut producing states are also expected to help coconut farmers. It is also worth mentioning here that, through Board's initiative some of the state governments have declared 25% additional subsidy for setting up coconut processing units.

While taking stock of the achievements made during last year, it is also necessary to mention here about the projects we could not accomplish fully during last year. It was expected that Government of Kerala would take a favourable decision on Neera in 2012-13 itself. Even though the committee met thrice, the final report is still awaited. It was estimated to procure 50,000 tonne copra from Kerala alone, but could only procure 20,000 MT. In spite of the budget allocation for setting up three coconut bio parks in Kerala, even the preliminary procedures for only one park at Kuttiyadi is completed. The lukewarm response of the industry to avail themselves the 25% additional subsidy declared by the government for setting up coconut based processing units is disheartening. Thus we have many positives and negatives before us and it is crucial to consider both while preparing our action plan for the coming year.

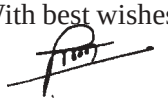
Effective team work of CDB, agriculture/ horticulture departments of the concerned state governments and the farmer groups is most essential for resolving the problems faced by the coconut sector. Only by binding together as a single cohesive force we will remain strong and able to reach our objectives. We have ahead of us the challenges of resourcing new ideas and better knowledge to make our previous successful models exemplary. All the members of the CDB team are requested to search for novel ideas and maximum information on coconut from all over the world to educate our CPSs and CPFs.

Two major areas we have to concentrate during the current financial year are the areas of marketing of value added coconut products and enhancing the production of quality seedlings. The single largest limiting factor in the proliferation of coconut cultivation in new areas is the acute shortage of quality seedlings. Our DSP farms should aim at more seedling production; also to inspire and motivate state governments to take up more seedling production under Regional Coconut Nursery scheme. Involvement of farmers, farmer collectives and private entrepreneurs are to be encouraged to establish nurseries to produce coconut seedlings. The aim should be to make nursery operations a profitable entrepreneurial venture. Our innovative marketing strategy need to be accelerated to cover major city markets in our country to make available value added coconut products.

Joint efforts are vital for persuading the state governments to formulate favourable policy decision in respect of neera tapping by farmers. It is a big saving grace to around 10 million coconut farmers in our country. It is more than a century since neera is wrongly classified under alcoholic beverages and it is high time to rectify this mistake. Neera is wrongly classified along with toddy under the definition, 'fermented or unfermented juice from Palmyra, coconut tree, date palm or any other palm tree'. Our plea is to rectify this wrong classification.

Agriculture and allied sectors can create more environment friendly 'green collar jobs' than any other industrial sector in our countryside. Technically qualified, trained people are required for producing neera. If we can give immediate training to people, around one lakh 'green collar job' opportunities can be created in Kerala alone. Similar slots can be created in traditional coconut growing states. In one or two years in neera sector alone more employment opportunities can be created than in any other sector. It is alarming that a mistake created before a century is yet to be rectified. It is pathetic that we are unable to correct a mistake even when we are fully aware that it is a mistake. We hope that in coming years farmers are being heard and the farmer collectives also should have a say in policy making in farm sector. Let us hope that 2013-14 will be the beginning to fulfill such aspirations of coconut farmers in our country.

With best wishes,



T K Jose
Chairman

2012-13 - An year of accomplishments and triumphs

Remany Gopalakrishnan
Deputy Director, CDB, Kochi

"The vision set for coconut development is to take India to the number one position in coconut sector; in production, productivity, processing for value addition and export. Our prime focus is the financial and social upliftment of the coconut farmers", Chairman of the Board, outlined in his page to the readers of Indian Coconut Journal in April, 2012. The year 2012-13, the starting year of 12th Five Year Plan, made kick start to many beginnings with optimistic notes to fulfill this vision during the Plan period. The year witnessed many milestones, remarkable events, promising announcements and declarations by central and state governments, largest export earnings, highest fund utilization, many policy decisions in favor of farming community, introduction of modern marketing strategy, hosting of international events..... the triumphs of the year goes on. These triumphs were the fruiting of the efforts of Board which were dovetailed through innovative ideas, novel development strategies, linkage and diverse integration and handholding of millions of coconut farmers and stakeholders.

This article throws light on the salient achievements recorded in 2012-13. Other articles carried in this issue depict scheme wise achievements of the year.

Handholding of Small and Marginal Coconut Farmers

By attaining the annual production at 16943 million nuts, India positioned herself as the premier producer of coconut in the world. She has already been holding the monopoly of highest per ha productivity among the major producers. Thus India has got in hand the first two targeted goals when 2012-13 passed by. Another major task set in by the Board was the mobilization of small and marginal coconut farmers who are otherwise scattered and unable to bargain or come forward to strengthening their economy. Board had made a beginning to push through this task in 2011-12 itself by mobilizing small and marginal farmers under the banner of Coconut Producers Societies (CPS) and their federated forms of Coconut Producers Federation (CPF). The year 2012-13 witnessed cropping up of CPSs and CPFs and their active involvement in activities like establishment of modern copra dryers, tender coconut parlours, laying out of demonstration plots, procurement of seednuts, export of coconut products and so on. So far 2295 CPS and 121 Federations have been registered with Board. Nearly 80 lakh palms and 1.5 lakh farmers have been brought under the umbrella of these CPSs and Federations. In Kerala farmers have started procuring dwarf nuts for raising seedlings suitable for tender nut varieties. This is from the realization that tender coconut water is going to be the world's finest drink and that Kerala is lacking sufficient dwarf palms either for tender nut harvesting or for future hybrid seedlings production. Some of them have started establishing big copra dryers and many have started functioning as procurement centers of quality copra at the Minimum Support Price fixed by government.

Coconut Producers Company is the apex body envisaged in its series. Formation of two Companies in Kannur and Palghat districts of Kerala is progressing while Tamil

Empowering the group

Nadu will take the next turn to register such Companies.

Government orders and declarations

Policy interventions both at the central and state government level are vital for protecting the coconut sector of our country. The year 2012-13 witnessed many declarations and announcements at Central and State level which would be instrumental for devising future course of action for the benefit of coconut industry. Government of India had declared MSP for milling copra at Rs. 5100 and for ball copra at Rs.5350/- in 2012 season. Dehusked green coconut was permitted to procure at Rs. 14/- per kg. Government of Karnataka had announced additional Rs.700/- per quintal for ball copra to facilitate the procurement. Subsequently Government of Kerala too announced Rs. 500 per quintal for milling copra for the procurement through societies. Coconut Producers Societies were encouraged to produce quality copra and to take the advantage of the MSP. In 2013 season a hike of Rs. 150/- was made in MSP for both milling and ball copra, making the MSP to Rs. 5250/- and Rs. 5500/- respectively. Procurement price of Rs. 14.25/- was fixed for dehusked green coconut.

Neera and its downstream products have received much attention as non-alcoholic, delicious and nutritious products, which could ensure remunerative price to farming community. This is in the context that countries like Indonesia, Thailand, the Philippines and Sri Lanka are eyeing this product as the number one export earner. The neera industry has made strong footings in Indonesia. India can also follow the suit. In a state like Kerala alone, 180 million coconut trees are available and a small percentage of these trees can be put to use for neera tapping. The industry will grow as a big export earner to the country; as a sustainable income source to the farmers and above all an employment generating industry. The Board's efforts to make a move in the Government of Kerala had yielded result. The Budget speech 2013 contained a declaration of Rs. 15 crores for starting 10 neera processing units in 10 districts of Kerala apart from other provisions. Central finance minister too did not leave coconut sector in dark. A provision of Rs.50 crores was set apart towards the grant in aid to Farmers Producers Organizations (FPO) @ Rs. 10 lakh to each unit. Another important announcement was earmarking Rs. 75 crores for continuing the Replanting and Rejuvenation scheme implemented on pilot basis in three districts of Kerala. These announcements and declarations were vivid evidence of coconut getting adequate importance at national level as a potential crop of the future.

The dip in coconut oil price and consequent policy decisions also helped the industry a lot. The enhancement of import duty on crude palm oil from 0% to 2.5% and removal of port restriction and quantity restriction in export of coconut oil were great relief to farmers and exporters. Many demand in this sector still remained unsettled. Coconut oil is still included in the export restricted list and this misplacement does not allow the exporters to avail the 5% export incentives eligible under the Vishesh Krishi Gramodyog Yojana.

The year also witnessed materializing some of the declarations of the governments. Initiation of 'Coconut Park' at Kuttiayadi, Kozhikode by Kerala State Industrial Development Corporation (KSIDC) is one among them for promoting value addition in coconut. Entrepreneurs who find it difficult to get adequate space or those who are constrained to raise the capital for the purpose could avail the benefit of starting industries in the Park. Likewise other State Governments have been requested to identify suitable land for 'coconut bio parks'. If state governments extend support to potential entrepreneurs the pace of value addition could be accelerated in coconut. A subsidy of 25% from state government, over and above that offered by CDB has been agreed to by Government of Kerala which need be replicated by other state governments. Technologies and financial support are already available with the Board under Technology Mission on Coconut (TMOC). Effective teamwork is advocated by the Board in all these areas and India can reap success in all areas so that her position in coconut sector wouldn't be second to none.

The decision to conduct investor's meet in all major coconut growing states for initiating processing units for value addition was put into action by organizing two investors meet during the year.

The first in the series was conducted at Kochi on 2nd November 2012 and the second on 11th January, 2013 at Kozhikode, Kerala. Similar meets are planned in all other states for sensitizing entrepreneurs. In the context that tender coconut water has gained acceptance as the healthiest drink of the era, more entrepreneurs have to be attracted to the tender coconut processing sector. Board is targeting to have minimum 100 tender coconut processing units during next 2-3 years. Celebration of World Coconut Day in a befitting manner at Thane in Maharashtra was also very well appreciated.

Value added coconut products

Innovative marketing strategies

The demand for coconut products is countrywide. In the north and north-eastern parts of the country coconut consumers of various value added products are on the increase. Non availability of the emerging products put hurdles to their popularization. Efforts of the Board on awareness creation on pan India basis yielded fruitful results. In order to make available the products at least in 63 JnNURM cities a new and innovative marketing strategy had been initiated by the Board during the year through the well distributed marketing team placed in the potential cities and also through the state centres and regional offices which can undertake market promotion activities in the adjacent cities. The idea that 10 nascent products were presented in a product basket was also the unique idea of the year. Products like tender coconut water, coconut cream, coconut milk, coconut milk powder, desiccated coconut, coconut ice cream, ball copra, coconut chips and virgin coconut oil found place in the product basket.

Growing Export Volume

International trade plays a vital role in economic development of the country. The global competitiveness of coconut sector truly depends on the volume and value of trade made. The export and import value of coconut products of India presents the bleak ranking of the country. The country's share in the world trade of copra and coconut oil is very insignificant when comparing the volume of trade of Philippines, Indonesia and Sri Lanka in the world market. The country has been lagging behind in export of coconut products till recently. Only coir and coir products figured significantly. The year passed by placed India in a far better position by earning significant export value through activated carbon. The value touched Rs. 834.75 crores in 2011-12, registering an increase of 56% over the previous year. This will touch Rs.1000 crores in 2012-13 when the final value is available. Revenue from activated carbon may overtake the export figure of even coir products in the short run. Export value of coir and coir products in 2012-13 is estimated at Rs.1100 crores. **Thus 2012-13 recorded the maximum export earnings the coconut sector has ever recorded.** Coconut Development Board, being the Export Promotion Council (EPC) for coconut and coconut products, is actively promoting export of coconut products and extending necessary support to exporters. More than 894 exporters have now registered with the Board. This achievement is in the midst of competition posed by the other big players. No doubt India can emerge as a big competitor in export sector since coconut and coconut products of the country command consistent and growing demand worldwide

Training programmes

Imparting skills on product development to prospective

entrepreneurs and women groups, coconut climbing to unemployed youths, leadership training to office bearers of Coconut Producers Societies etc were the pivotal activities of the Board for the year 2012-13. Board at its Technology Development Centre at Alwaye, Kerala has imparted training to women's group, NGOs and other voluntary agencies for upgrading entrepreneurship development skills for optimum utilization of resources in coconut. During the year the Board imparted training to 880 trainees from all over India. The objectives of the program include imparting leadership qualities, provide marketing tips, familiarize quality control, quality management systems etc., in food processing sector.

The year also saw the spreading of Friends of Coconut Tree Training to neighboring states. There has been consistent increase in trained youths. Besides Kerala, number of Friends was increased in Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra and Goa. The year had produced 6917 FoCTs which includes 572 women trainees. The daily income of the trained FOCTs ranges from Rs. 500 to 1000/- and monthly income from Rs. 10000 to 15000/-. Easy availability of climbers for harvesting and other operations and providing employment opportunities to unemployed youths are the advantages accrued out of the training programme. Elevating social and economic status of the economically deprived are the lateral advantages.

Educational institutions could play a major role in the vision building of CPS. The leaders of these farmer groups were given training in reputed management institutions like School of Communication and Management Studies and Rajagiri Centre for Business Studies, Kochi, Amrita Institute of Management Studies, Kollam, Holy Grace Institute of Management Studies, Thrissur, Local Economic Development Center Kochi etc. The training was a mentoring process for equipping the CPS office bearers to stay united for working together for their rights and also for maximizing farm revenue. Now the transition of CPS to Federations and Federations to Producer Companies has to be made speedy and faster.

Women empowerment through FoCT training

Farmers are totally unaware that coconut is an incessant source of raw material for a variety of industries. When the Coconut Producers Societies and Federations are formed, they have to work for the formation of Companies which would be capable enough to take high task of venturing into bigger coconut processing units. With this intention in mind leaders of the groups were given specific direction to go for suitable value addition and also to start tender coconut parlors and other mode of selling tender coconuts at the IT parks or tourism spots or National Highways. Producer Societies and Federations in Kerala, Tamil Nadu, Karnataka and Andhra Pradesh started big thinking of coconut based industries of their choices. This sensitization was made possible through the CPS mentoring training programme.

Price crash and market intervention

Interest in coconut farming directly relates to the profitability of the crop. Likewise only when farmers get remunerative price to their produce they bestow proper attention to the crop. Negligence to the crop, in turn, further reduces the profitability of the crop. The year 2012-13 was not an encouraging year as far the profitability of crop was concerned. The price of copra and coconut oil plummeted to rock bottom during the year. This steep

fall was from an ever highest price recorded in 2011 for coconut oil and copra. Coconut oil price shot up to 10,148 in May, 2011. Average price of the year was Rs. 9069/-. The year 2012, on the other hand, experienced a drastic dip and the price of coconut oil touched a bottom level of Rs.6343/-. Even the festive season witnessed the severely crashed price level of Rs.6014/. This precarious situation created panic and embarrassment among the farming community. There has been a slow revival from December 2012 to February 2013 which is a positive sign and farmers look ahead the coming season with great expectation.

Government intervene in the market and protects the farmers from price fall by declaring MSP for coconut products. The intervention of the Central and State governments in the market in 2012 and 2013 seasons is discussed under government orders and declarations. CPSs and CPFs should take advantage of this protective mechanism from time to time.

International Events

It was a prestigious event in 2012-13 that India hosted an international event during 2-6 July, 2012 where 21 countries took part and exchanged the views and status of coconut growing in respective countries. The occasion was 45th Cocotech meeting of the intergovernmental organization for the Asia and Pacific countries called APCC (Asian and Pacific Coconut Community) headquartered in Jakarta, Indonesia. The meeting which is held once in two years in the member countries was deliberating the topic of 'Inclusive Growth and Sustainable Development of coconut industry'. The deliberations were completed in five technical sessions on the topics Policies and Programmes for Inclusive growth, Market Development and Health attributes of coconut, Technological Development on coconut crop improvement/ Agronomy, Nutrition and Coconut Based Farming Systems, Sustainable Integrated Pest and Disease Management Strategies in Coconut Farming and a farmers interface. A coconut Festival showcasing the technologies and products of various countries and institutions was another attraction of the event. The event was organized by the Board on behalf of Government of India.

Coconut festival - showcasing products

Experiencing India - delegates from abroad

Board had become the platform for yet another historical event in 2012-13. Republic of Trinidad and Tobago and Government of India signed an MoU through St. Patricks

Coconut Growers Co-operative Society and Coconut Development Board in the month of May, 2012. MoU was mainly soliciting expertise from India for revamping the ailing coconut industry of Trinidad and to develop a road map for future.

The visit of Mozambique Agriculture Minister, Mr. Jose Pachico and his team to the Board's HQ and their evincing interest in availing our technologies in coconut sector left another memorable mark of India's progress in international relation.

Production of quality seedlings - a thrust area

Other Ongoing Programmes

Government of India had approved programmes with a total outlay of Rs.890 million during 2012-13. ie. for ongoing programmes Rs. 550 million, Replanting and Rejuvenation programme Rs. 320 million and Coconut Palm Insurance for Rs. 10 million.

Board could got in hand many remarkable milestones, records and accolades by properly managing and utilizing the fund. Some of the remarkable achievements which left footprint in the year were implementation of rejuvenation scheme in the entire targeted area in Kerala and Andaman &Nicobar Islands and utilization of Rs.495.5 million against the originally envisaged budget provision of Rs. 320 million, coverage of 10,525 ha under laying out of Demonstration plots and utilization of 19 crores for the purpose of new planting in 2250 ha, production of 11 lakh seedlings in the Demonstration cum Seed Production Farms of the Board, starting of 29 new coconut based industries under Technology Mission on Coconut, and alienation of 40 ha area in Palghar, Maharashtra for establishing a new Demonstration cum Seed Production Farm for coconut. Value addition was accelerated and the Technology Mission paved way for the achievements by spending Rs. 764 million. There were 68 new projects funded under the Mission.

In order to cater to the increasing demand for hybrid seedlings, Board has taken up collaborative research projects with reputed academic institutions and NGOs to produce hybrid seedlings. Five academic institutions and an NGO came forward to associate with the Board. Identification of mother palms have been already initiated by the colleges and Mythri an NGO based at Palakkad has already started hybridization and production of hybrid seedlings. Implementation of development programmes through convergence with other institutions has taken a new direction in the year. National Rural Livelihood Mission (NRLM) was approached for joining hands with CDB for the conduct of FOCT training. NRLM, Karnataka's nod to come forward to take up training programme in the state is a welcome step. Training programme conducted by DSP farm Mandya to women groups in the district on coconut based convenience foods was a step in decentralization of our activities at the field level. The initiatives of the Board in development activities have received very good response from various institutions. The Panchayat raj institutions in many districts have evinced interest to handhold with Board. All these accomplishments give us greater expectations for maintaining tie ups and collaboration with other state and central organizations for the future activities.

Coconut was always in the forefront in all media during the year, either the news is on price fall, or FoCT or CPS or neera; coconut was in the lime light through out the

year. Thanks to the vibrant information dissemination mechanism of the Publicity wing of Board. Coconut in lime light attracted the Parliamentarians too. MPs from south India raised several questions on coconut, its price fall, productivity improvement, rejuvenation programme, CPS and copra procurement and so on.

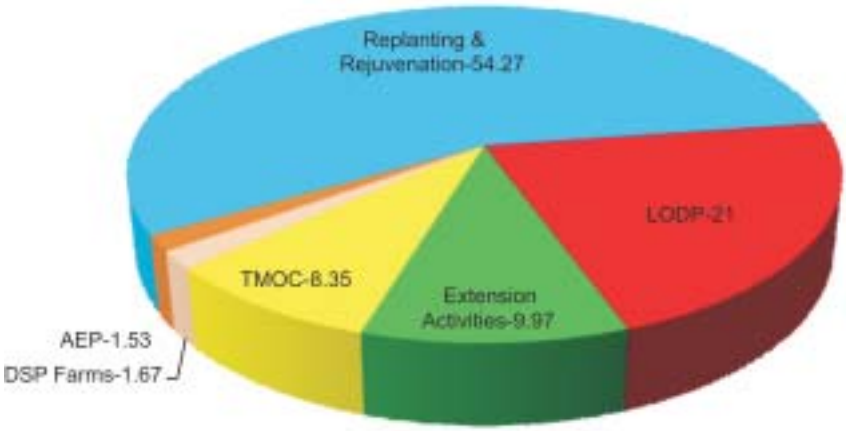
A coconut palm insurance project was under implementation on pilot scale for providing insurance coverage for palms of all age groups. An amount of Rs 8.2 million was utilized for the purpose towards 50 per cent share of Board in the states of Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Maharashtra and Odisha.

Evaluation Studies

It had become mandatory for the Expenditure Finance Committee of the Five Year Plan that the XI Plan programmes of the Board have to be got evaluated through external agency for considering the 12th Plan programmes. Board had entrusted the evaluation study of XI Plan programmes to Chandra Gupta Institute of Management, Patna and a mid-term evaluation of Replanting and Rejuvenation scheme with Institute of Small Enterprises Development, Kochi. Strong recommendations to continue the productivity improvement programmes, formation of farmers' collectives and training to Friends of Coconut have been emanated from the studies which will form the guideline for framing programmes for the 12th Plan period.

Reliable and up to date yield and area estimate is a prerequisite for devising policy initiatives in coconut sector. This is also essential for farmers to plan for processing and marketing activities and also to get maximum profit from farming. Area and production estimate is now available from Directorate of Economics and Statistics, Government of India, New Delhi and the data pertains to two years behind the current year. Therefore, Board for the first time in the country thought of a survey of concurrent estimation of coconut yield. The states covered are Kerala, Andhra Pradesh, Tamil Nadu, and Karnataka. The survey was carried out in association with educational and research institutions of respective areas. The outcome of the survey gives good indication to continue similar surveys in future to have concurrent values in production and productivity.

Utilization of fund 2012-13 (in percentage)



Record Fund Utilization

The Year 2012-12 marked the highest utilization of fund in the history of Board by spending Rs. 10567 million. This is against the original budget allocation of Rs. 890 million. Out of the amount spent for various development programmes, maximum allocation (47 %) was utilized under the rejuvenation programme. Second highest (21%) was under the other productivity improvement programme of Laying out of Demonstration Plots and the third one for Information and Information Technology with 9.97%. Technology Mission on Coconut consumed 8.31.% and stood in the forth rank. There are two more schemes which spent more than Rs. 10 million which are new planting subsidy scheme (1.53%) and DSP farms (1.63%). The Board has the record of utilizing 100 % allocation of fund placed at the disposal of the Board.

Thus the year passed by has left behind many remarkable and noteworthy records which will bring about many salutary implications in the coming years. The challenging role being played by Board in pushing India in the forefront of all major players will not be impossible if the efforts initiated in the year are continued with determination and unity. Let us welcome a new fiscal year which ignites more expectations and enthusiasm.

Reaching out to the consumer with innovative marketing strategies

Deepthi Nair. S.
Marketing Officer, CDB, Kochi

The successful development of any agricultural crop is dependent on the market price and position it sustains in the market. A sustainable remunerative price is the only incentive which will encourage the farmer to manage his crop well leading to higher levels of production and productivity. Ultimately it is the returns that matter. Looking from such an angle, the year 2012-13 was a really bad year for coconut and its products. The price crash that occurred at the fag end of 2011 continued with only a minor increase during December which provided an interim relief to the coconut farmers. Prices were as high as Rs.10,148 per thousand nuts in May 2011 which was a bumper year for the coconut sector. It crashed to Rs.7,965 in December 2011. The yearly average price recorded at Rs.9,069. Still adoption of alternative marketing systems and primary processing and conversion to intermediate products helped farmers gain reasonable price for their produce.

The single marketing support that provided relief to the farmers during this price crisis was the procurement under the Price Support Scheme (PSS). Government of India announces the Minimum Support Price (MSP) for selected commodities every year to protect the farmers from price fall. When prices fall below the announced MSP, the Government machinery initiates procurement of produce at the announced MSP.

When a substantial quantity of produce is removed from the market through procurement at MSP, market forces come into play and automatically market prices increase. This is the way MSP supports the farmers during price crisis.

In coconut, procurement of copra is announced since it is the intermediate product of coconut with assured shelf life. The MSP declared by Government of India for season 2012 was Rs. 5,100 per quintal for milling copra and Rs.5,350 per quintal for ball copra. A price of Rs.1,400 per quintal was also announced for dehusked mature coconut with water so that farmers can supply coconut at this rate to processors who can convert it to copra and supply to the procurement agencies.

A major breakthrough that could be achieved during this year was that farmer collectives were recognized as procuring agencies in the state of Kerala. CDB had initiated the formation of grass root level collectives called Coconut Producer Societies (CPS) in the major coconut producing states. In this context, CDB requested the Government of Kerala to authorize CPS as the procurement agency of copra in the state which was

approved. This enabled the CPS in the state to procure coconuts from their member farmers at MSP rates, convert to copra and supply to the state level procurement agencies. This activity has manifold significance in the growth cycle of the farmer collectives. The visible advantage is that the benefits of MSP could reach the genuine coconut farmer. Apart from this, the group activities involved in the whole of the procurement process right from planning of the procurement to the supply of copra to the state agencies increased the group cohesiveness of the farmers and created an ownership feeling. The CPS were also exempted from producing certificate of Agricultural Officer since CDB assured the genuineness of the farmers.

This recognition from the government instilled a sense of enthusiasm in the coconut farmers who were reeling under pressure owing to price fall. We saw farmer collectives join together, take copra dryers and lease and undertake copra production in the dryers on rotation basis. Thus CDB could convert the benefit of MSP to assured price for the member farmers which increased their confidence in undertaking more group activities.

The cost of cultivation of coconut had increased tremendously due to the increased cost of agricultural inputs mainly fertilizers. The announced MSP itself was inadequate to meet the production needs of the farmers. Realizing this, CDB approached different state Governments to provide an additional incentive to the farmers apart from MSP. Government of Karnataka announced an additional incentive of Rs. 700/- per quintal for ball copra in addition to the MSP of Rs.5350/-. Government of Kerala announced an additional support of Rs.500/- per quintal of copra supplied for the procurement agencies undertaking production of copra. 54 CPS had participated in the procurement operations in the state of Kerala and supplied 725 MT of copra under PSS.

CDB suggested a higher MSP for season 2013 considering the increased input cost. The MSP for season 2013 was announced by Government of India with a slight increase over the previous year at Rs, 5250/- per quintal for milling copra and Rs. 5,500 per quintal for ball copra. The MSP for the procurement of mature de husked coconut with water was declared at Rs. 1,425 per quintal.

CDB was already implementing schemes for providing assistance for installing modern copra dryers, but most of these dryers were of smaller capacities. The need for adequate infrastructure for copra making at the producer level, that too on a community basis was realized. Farmer collectives had to take larger dryers on lease during the PSS operations. This prompted CDB to introduce a scheme for installing community based infrastructure for copra drying. The Board announced financial support under Technology Mission on Coconut (TMOC) for federations of CPS installing copra dryers of minimum 10000 nuts capacity per batch. The support was to the tune of 50% subject to a maximum of Rs. 6 lakhs. Copra driers of 10000 nuts capacity are being installed under the auspices of Federations of CPS in different districts of Kerala. This activity can be interpreted as the first stepping stone of farmer collectives into the sector of food processing and value addition.

Under TMOC, as part of market promotion, an amount of Rs. 7 lakhs was released for brand promotion of brands of various processed products. 16 projects were approved for the establishment of tender coconut retail outlets out of which 6 were installed and subsidy released to them. Representatives from three processing units participated in exhibitions abroad and were able to establish marketing tie ups in the global market through display of their products in the event.

India, being a country which stands second in the world in population, the domestic market itself offers tremendous potential for our products. Realizing the potential of the domestic market, CDB started introducing innovative marketing strategies for establishing markets. The objective was to introduce coconut and its products to the consumers in areas where coconut is not cultivated. A multitude of processed products is possible from coconut and the first step was to introduce these products to the consumers. CDB developed a product basket of coconut products comprising of packed tender coconut water, coconut chips, coconut milk, coconut milk powder, virgin coconut oil, desiccated coconut, ball copra, vinegar, coconut oil for edible and non edible purposes, coconut ice cream etc. The JNNURM cities accommodate more than 65% of the population of India and CDB intends to target these cities in the first phase.

With an objective to introduce coconut and coconut products to the North Indian markets and establish a defined market among the consumers, CDB intends to utilize the potential of the upcoming India International Horticulture Market at Ganaur. Retail outlets in Rohtak mall in Delhi is also planned which will help in introducing coconut products to consumers.

In order to promote the consumption of tender coconut among consumers thereby enabling the farmers be assured of an enhanced income, the Board introduced schemes for financial assistance for initiation of tender coconut outlets in the country. The entrepreneur has to submit detailed project proposal to the Board regarding objectives, procurement of tender nuts, expected sales, profitability, etc along with detailed sketches of the outlet. Financial assistance is to the tune of 50% of cost of infrastructure subject to a maximum of Rs. 1.5 lakhs.

CDB had initiated a project for the collection of market intelligence in the North East which is being successfully continued. The project was initiated on a pilot basis towards attaining the Board's objective of establishing Market Intelligence on coconut and coconut products in India. The successful implementation of the project has made the road way for the establishment of Market Intelligence throughout the country. Dissemination of market information will provide the stakeholders, including farmers, processors, traders, exporters etc an awareness of the prevailing market prices which will help them in making good marketing decisions.

The efforts of CDB could make a boost in export of coconut and its products. It is estimated that the export figures for the financial year would exceed well beyond 1000 crores. Activated carbon is still the single largest product to be exported. Export of mature green coconut has registered a tremendous increase during the period. Subsequent to the continuous representations from CDB, the port restriction for export of coconut oil has been lifted and at present, export of coconut oil is permitted through all 13 EDI ports of India. Similarly the quantity restriction and packaging restriction in export of coconut oil has been removed. Export of branded oil up to 5 kg with a Minimum Export Price (MEP) tag of US $ 1500 per tonne without quantitative limitations is permitted.

Palm oil is the major competitor of coconut oil and hence in order to promote consumption of coconut oil, CDB had suggested various measures like inclusion of coconut in the public Distribution system, distribution to Anganwadis and the noon meal programme in schools etc. The tariff value (the rate at which import duties are determined to prevent under-invoicing) of palm oil was raised from US$ 447/tonne to US$ 802/MT, a rise of 79.4%. The hike in tariff price would push up the price of imported palm oil and the shrinkage in price difference between coconut oil and of palm oil would definitely work in favour of coconut oil. The existing customs levy of 0% for crude palm oil was raised to 2.5% on revised tariff value.

Neera and its value added products provide potential avenues for development of the coconut sector. CDB has made representation to the State Governments in major coconut producing states to permit Neera tapping. Neera is the non-alcoholic and nutritious drink from the immature inflorescence of coconut which can be promoted due to its potential for value addition, employment generation and better returns to the coconut farmers. Products like coconut flower syrup, jaggery and coconut palm sugar are produced from Neera. Export of Neera and its products, especially palm sugar has shown a surging trend in production and market demand as a healthy and natural product. In Philippines, projects on coconut sugar were initiated as early as 1995 and the other major coconut growing countries have stabilized their technology and packaging and have established speciality markets globally. Industries based on coconut with vast economic prospects have been established to cater to the domestic and local demands. Indonesia produces over 6 lakh MT of palm sugar in a year. Indofood purchases over 30,000 MT per year while Unilever purchases the same quantity for their sweet soy sauce product. Policy decisions in favour of Neera tapping will pave the way for a radiant rise of the sector.

The revival and sustained development of the coconut sector is dependent on the extent of product diversification and application of innovative marketing strategies to explore and establish new markets, developing already explored markets and maintain existing markets. The goal of the Board is to make available coconut and its value added products all over the country.

Replanting and rejuvenation programme for better productivity and income

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Coconut occupies a prime position in the socio economic development of the country. The crop which is cultivated in 19 lakh ha. is producing 1694.3 crore nuts. As per the 2011 statistics, India is the biggest producer of coconut in the world.

In India, the maximum area under coconut cultivation is in Kerala and the crop plays a very important role in the socio economic development of the state. Kerala, the state which once enjoyed the premier position in coconut cultivation and production is now scarce of suitable land for expanding area under coconut. The share in area and production of coconut reached 41.6 and 36.8 per cent respectively. The annual production of Kerala is 62,394 lakh nuts and the per ha. productivity is 6862 nuts while that of Tamil Nadu is 14,371. Shift in cultivation to other more remunerative crops, high cost of cultivation, low return from coconut, prevalence of pests and diseases like root wilt, bud rot, etc are the reasons for the negative growth rate in area and production of coconut in Kerala. Another reason for the low productivity in coconut is the prevalence of old, senile and unproductive palms. It is estimated that more than 10% of the palm population is over aged.

Though India is the third highest producer of coconut in the world it has the potential to become the world leader. A major reason for the decline of production and productivity is the large scale infection of coconut by root wilt disease in different parts of the country. In order to control the spread of disease and enhance the productivity of coconut gardens, a major initiative has been launched by the Government of India, Department of Agriculture & Cooperation by implementing the pilot project on Replanting and Rejuvenation of old and senile coconut gardens in the worst affected in three districts of Kerala and A&N Islands.

Root wilt affected palms being cut and removed

The prevalence of old and senile palms, poor genetic base of the planting material under cultivation, over populated stands of both coconut and other trees in the homestead, poor management attention given to the crop and severe incidence of pest and diseases are the major reasons for the low productivity. One of the strategies to vitalize the coconut industry is to improve the general agricultural base with large scale rejuvenation of the coconut gardens. Hence this project was implemented for improving productivity through a programme of cutting and removing the old, senile, and unproductive and disease advanced palm population, replanting with high quality seedlings and rejuvenation of the existing gardens by adopting integrated nutrient management. The project is sanctioned for the last three years of the XI Plan period at a total cost of Rs.2275.643 crores and subsidy component of Rs.478.504 crores as a Central Sector Scheme. Shri. Sharad Pawar, Minister for Agriculture, Government of India inaugurated the scheme at Thrissur district in Kerala in December 2009.

The objectives

This massive programme is designed to help the coconut farmers to improve the productivity of coconut and thereby the income of farmers. Root wilt affected coconut gardens can be rejuvenated in two ways: the disease affected and unproductive palms shall be cut and removed and high quality seedlings upto a maximum of 70 seedlings per acre shall be planted. Scientific management of coconut garden is the second step. Board has been implementing this project on a pilot scale in Thiruvanathapuram, Kollam and Thrissur districts in Kerala and in Andaman and Nicobar Islands.

Components of the programme

Cutting and removal of all old, senile, unproductive and disease advanced palms followed by replantation, rejuvenation of existing gardens through integrated management practices, assistance for replanting, implementation, monitoring, evaluation, training etc. are the components of the replanting and rejuvenation programme.

Salient Features

The programme is implemented in a farmer participatory mode in contiguous areas within panchayaths in identified districts, for visible impact. The programme will commence in clusters of 25-50 ha or in each panchayat ward as a cluster unit, where farmers have formed themselves into a group. Each cluster will have elected cluster convenor and sub group leaders. For the speedy and effective implementation of the project in each area, a local development committee will be formed with the respective president of the grama panchayath as President, Agriculture Officer of the area as convener and a representative of Coconut Development Board as member. Maximum transparency is assured in the implementation of this project wherein all the farmers of the area shall be beneficiaries.

Training and Capacity Building

Training will be imparted to farmers in scientific management of coconut palms, including identification of root wilt disease advanced, old unproductive palms, marking of the palms to be removed and conduct of initial base line survey. Awareness/ training programmes/ group discussions and workshops involving experts from CPCRI, State Agricultural Universities (SAU), Department of Agriculture / Horticulture and Coconut Development Board (CDB) will be arranged periodically

Steps of implementation

As a prelude to implementation, farmers of the area will be briefed on the details of the project and also about the baseline survey. The first step of the project implementation is farmer participatory survey in the project area. Trained cluster members will be undertaking the survey in the project areas. An action plan will be created on the implementation of the rejuvenation programme on the basis of the survey. In the action plan, details of the number of palms to be cut and removed, the amount to be earmarked for that, the number of seedlings to be replanted, management practices to be followed etc shall be clearly mentioned. Officials of the Board will assist in the preparation of the project by the cluster. A consolidated project for the

Burning the trunk of the disease affected palm to arrest the spread of the pests / diseases

Cowpea grown in coconut basins

Panchayat / Municipality approved by District Agriculture Officer will be submitted to the state level committee and the state level committee will submit the final project to Coconut Development Board. Board will convey the approval of the project implementation to the respective Krishi Bhavan. The beneficiary farmers will be distributed the eligible financial assistance through their respective bank accounts.

Assistance extended to farmers

A subsidy @ Rs.500 per palm for the first 20 palms, Rs.250 per palm for subsequently removed palms, subject to a maximum of Rs.13,000/ha shall be provided to the farmers for cutting and removal of old, senile, unproductive and disease advanced palms. Financial assistance @ Rs. 20 is provided for replanting new seedlings. For adoption of integrated management practices, a subsidy of Rs.15,000/ ha will be provided in two installments of Rs.7,500/- each by way of inputs. The eligibility for availing assistance under this component is a maximum 4 ha. per beneficiary.

Management practices

Basins of 50 cm depth shall be made two meters away from the base of the palm during May-June. Lime @ 1 kg per palm can be mixed with the soil and during June. Chemical fertilizers as per the stipulated doses may also be applied. Urea @ 750 gm, Super phosphate @ 950 gm and Muriate of potash @1.10 kg is the recommended dosage of fertilizers for average managed coconut palms. For better managed gardens, urea@ 1 kg, super phosphate @ 2kg and muriate of potash @ 2 kg per palm may be applied. Apart from this, gardens showing deficiency of magnesium and boron may apply 500 gm magnesium sulphate and 250 gm borax during September- October. 100 gm of cowpea is also provided as green manure.

Farmers may jointly undertake integrated pest and disease control measures against rootwilt, leaf rot, red palm weevil, rhinoceros beetle and eriophyid mite. Weed controlling and proper maintaining of the garden is one of the most important step to be followed in rejuvenation. Direct sunlight is essential for the proper growth of the palms. Mulching is an important practice to be followed for moisture conservation. Husk burial help to absorb and retain large quantities of water for use by coconut palms. Irrigation shall be started from December onwards. Farmers shall plant intercrops like banana, cassava, vegetables, ginger, turmeric, pepper, nutmeg, cocoa etc. for realizing maximum income. Famers can also avail the financial assistance offered by State Horticulture Mission for cultivating intercrops.

Status of implementation

The pilot project on Replanting and Rejuvenation programme was implemented in three phases. 12 state level monitoring committee meetings (SLMC) were periodically convened from 2009-10 onwards for recommending projects worth Rs.231.56 crores for the implementation of this programme in 272 panchayaths. The details of the amount sanctioned for this programme is given Table-1.

Table-1. Sanctioned Projects

	Cutting	Rejuvenation	Replanting	TOTAL
Phase-1				
Thiruvananthapuram	1475.65	1260.15	67.41	2803.21
Kollam	1161.17	928.071	39.93	2129.171
Thrissur	1406.06	1234.71	47.48	2688.25
Sub- total	**4042.88**	**3422.931**	**154.82**	**7620.631**
Phase-2				
Thiruvananthapuram	1365.34	1403.52	26.85	2795.71
Kollam	1455.26	1393.18	30.4	2878.84
Thrissur	1743.83	2117.01	28.56	3889.4
Sub-total	**4564.43**	**4913.71**	**85.81**	**9563.95**
Phase-3				
Thiruvananthapuram	643.57	669.03	10.46	1323.06
Kollam	893.72	860.38	20.41	1774.51
Thrissur	895.62	1966.98	12.19	2874.79
Sub-total	**2432.91**	**3496.39**	**43.06**	**5972.36**
Total	**11040.22**	**11833.03**	**283.69**	**23156.94**
DISTRICT- WISE ABSTRACT				
Thiruvananthapuram	3484.56	3332.7	104.72	6921.98
Kollam	3510.15	3181.63	90.74	6782.52
Thrissur	4045.51	5318.7	88.23	9452.44
TOTAL	**11040.22**	**11833.03**	**283.69**	**23156.94**

Table-2. Achievement under the Replanting & Rejuvenation Scheme Scheme in Kerala

DISTRICT	CUTTING & REMOVAL					REJUVENATION					REPLANTING		TOTAL FUND UTILIZED (Rs in Lakhs)
	TARGET		ACHIEVEMENT			TARGET (2 yrs)		ACHIEVEMENT			ACHIEVEMENT		
	PHY (Nos)	FIN (Rs in Lakhs)	PHY (Nos)	FIN (Rs in Lakhs)	NO OF FARMERS BENEFITTED	PHY (ha)	FIN (Rs in Lakhs)	PHY (ha)	FIN (Rs in Lakhs)	NO OF FARMERS BENEFITTED	PHY (Nos)	FIN (Rs in Lakhs)	
PHASE-1													
TVM	354632	1473.99	210575	847.23	51157	12584.80	1260.15	12584.80	806.11	120668	31550	6.31	1659.65
KLM	276876	1139.37	257970	986.30	67024	8927.72	928.07	8927.72	1022.58	86016	35055	7.01	2015.89
TSR	340575	1406.07	199793	757.58	33711	14015.76	1234.71	14015.76	709.604	75330	13525	2.71	1467.184
TOTAL	**972083**	**4019.43**	**668338**	**2591.11**	**151892**	**35528.28**	**3422.93**	**35528.28**	**2538.294**	**282014**	**80130**	16.03	**5142.724**
PHASE-2													
TVM	275373	1365.44	156800	774.56	43882	17403.11	1408.52	16040.81	893.6	92340	72972	14.59	1682.75
KLM	292483	1455.35	215965	1066.86	74416	19868.00	1393.18	17531	940.67	119906	86700	17.34	2024.87
TSR	353957	1743.87	283939	1389.81	61495	29181.11	2117.01	28973.61	1461.67	93836	64893	12.98	2864.46
TOTAL	**921813**	**4564.66**	**656704**	**3231.23**	**179793**	**66452.22**	**4918.71**	**62545.42**	**3295.94**	**306082**	**224565**	44.91	**6572.08**
PHASE-3													
TVM	129876	643.59	41241	201	10523	5638.47	669.03	5638.47	--	--	--	--	201
KLM	172954	853.73	15168	75.12	3991	11238	824.86	11238	--	60269	--	--	75.12
TSR	181239	895.87	33115	132.15	6712	18961.27	1966.99	18961.27	86.35	27601	25224	5.05	223.55
TOTAL	**484069**	**2393.19**	**89524**	**408.27**	**21226**	35837.74	**3460.88**	35837.74	**86.35**	**87870**	**25224**	5.05	**413.32**
G.TOTAL	**2377965**	**10977.28**	**1414566**	**6230.61**	**352911**	**137818.2**	**11802.52**	**133911.44**	**5920.584**	**675966**	**329919**	**65.99**	**12214.47**
DISTRICT-WISE ABSTRACT													
TVM	759881	3483.02	408616	1822.79	105562	35626.38	3337.7	34264.08	1699.71	213008	104522	20.9	**3543.4**
KLM	742313	3448.45	489103	2128.28	145431	40033.72	3146.111	37696.72	1963.25	266191	121755	24.35	**4115.88**
TSR	875771	4045.81	516847	2279.54	101918	62158.14	5318.71	61950.64	2257.624	196767	103642	20.74	**4555.19**
TOTAL	**2377965**	**10977.28**	**1414566**	**6230.61**	**352911**	**137818.2**	**11802.52**	**133911.44**	**5920.584**	**675966**	**329919**	**65.99**	**12214.47**

Nearly 23.77 lakh disease affected and old palms were identified for cutting and removal from a project area of 1.3 lakh ha was surveyed. Out of this 16.51 lakh palms (70%) are cut and removed benefitting 6.76 lakh farmers. Rs.62.30 crore has been already disbursed to the farmers as subsidy for cutting and removing the palms. Due to the unavailability of funds, Board is yet to distribute the balance subsidy of Rs.12 crore to 61,329 farmers. Cutting of palms of the second and third phase are in progress.

Board has so far spent Rs. 59.20 crores for undertaking best management practices in coconut gardens. Under the first phase, the project is fully implemented in 78 Krishi Bhavans. The fertilizer distribution of the second phase is yet to be completed. Since majority of the projects of the third phase was given approval during 2012-13, the fertilizer distribution is expected to be completed with the onset of monsoon.

Under this programme, 3.30 lakh good quality seedlings are so far distributed to the farmers. State government is formulating various other schemes to integrate with the schemes of central government to distribute good quality planting materials to farmers. Coconut Producers Societies are also in the offing to establish coconut nurseries in three districts to produce good quality planting materials. Most of the CPSs have targeted to produce maximum hybrids and dwarf varieties.

The cut and removed coconut timber logs - ready for commercial utilisation

So far Rs. 126.41 crores is expended for the implementation of this programme in three districts in Kerala and in Andaman and Nicobar Islands. In Andaman and Nicobar Islands so far Rs.2.89 crore has been utilised for cutting and removal of 15969 palms and rejuvenation of palm in 2020 ha.

ISED, the agency which was designated for analyzing the implementation of this project in its report has stated the necessity of extending this project to the other districts of Kerala. Central government was already addressed with this appeal with a request to allocate more funds in the 12th Five year plan for the same. The 2013-14 budget has made provision of Rs.75 crores for extending this programme in the entire state.

It is reported that the productivity of coconut has considerably improved in the project areas. The co operation extended by the farmers and representatives of the local self government institutions is noteworthy. In future Coconut Producers Societies can also take the lead in the speedy and effective implementation of these programme in collaboration with the nodal agencies.

Root (Wilt) Disease

Root (wilt) disease is non-lethal but debilitating and palms of all age group are affected. It is mainly found in Kerala and adjoining districts of Tamil Nadu. The etiology of the disease has been established due to mycoplasma like organisms. Lace bug, Stephanitis typica, is the proven vector, the leaf hopper, Sephonia greeni and the plant hopper, Proustista inoesta are the pupative vectors. Even though the effective prevention and control of the disease is ruled out, palms in the early stages of disease respond to management practices. Remove all highly diseased trees yielding less than 10 nuts per annum.Remove all disease affected juvenile palms and replant with disease tolerant seedlings. Leaf rot is superimposed in all the root wilt affected palms and hence adopt control measures

Rootwilt affected palm

regularly. Apply balanced dose of fertilizers. Improve health and natural resistance of the palm through proper management. Mixed farming and organic recycling improve the yield and general condition of the palm. Grow green manures in basins.

Integrated farming for productivity improvement

A programme covered in the length and breadth of the country

Leenamol MA
Technical Officer, CDB, Kochi

Integrated coconut farming is a scheme of the Board to improve production and productivity of the coconut holdings through an integrated approach and thereby increasing the net income from unit holdings. The programme consist of three components for improving productivity, viz; cutting and removal of less productive palms, following scientific management practices for rejuvenating the existing gardens and promoting the use of organic manure. Since cutting and removal of palms was included under the Replanting and Rejuvenation programme from 2009-10 onwards, this component was removed from the integrated coconut development programme.

A demonstration plot from Ernakulam district

Laying out of demonstration plots (LODP)

Financial assistance of Rs.35,000 per ha in two annual installments is provided for adoption of integrated management practices in disease affected gardens. The objective of the programme is to encourage the farmers to adopt the technology developed for the management of disease affected coconut gardens. Demonstration plots will help in motivating the farmers in adoption of result oriented production technologies.

Integrated Farming for Productivity Improvement on cluster basis:

The objective of the coconut clusters is increasing the production and productivity of coconut from unit holdings by proper and timely adoption of package of practices in a farmer participatory mode. This programme will facilitate the adoption of appropriate coconut

Table-1. LODP programme implemented directly and through state governments in 2012-13

Sl. No.	States	First year (Area in Ha.)	Second year (Area in Ha.)
1	Kerala	2709.00	1147.13
2	Karnataka	1190.48	559.95
3	Tamilnadu	1094.46	1146.94
4	Andhra Pradesh	573.91	369.24
5	Odisha	257.00	150.00
6	Maharashtra	527.98	353.65
7	West Bengal	50.00	0.00
8	Bihar	0.00	0.00
9	Goa	25.00	50.00
10	Gujarat	25.00	15.00
11	Chattisgarh	0.00	0.00
12	Andaman & Nicobar	100.00	133.00
13	Pondichery	15.00	0.00
14	Lakshadweep	5.00	0.00
15	Assam	42.13	27.49
16	Tripura	10.00	10.00
17	Nagaland	10.00	10.00
18	Arunachal Pradesh	5.00	10.00
19	Meghalaya	0.00	0.00
20	Mizoram	10.00	0.00
21	Others	0.00	0.00
	Kuttanad, Idukki Packages	3875.00	0.00
	Total	**10524.96**	**3982.40**

based farming systems and promote farm level processing for value addition on a community basis. The scheme is being implemented by the Board on cluster basis in a contiguous area of appropriate size of 25-50 ha irrespective of the individual size of the holdings. The selection of the cluster is based on criteria such as demonstration value, easy accessibility, availability of minimum infrastructure facilities for the adoption of average management practices, cohesiveness of the group and most importantly the readiness of the farmers in the cluster to assume responsibility and implement the programme in a farmer participatory mode as per Board's guidelines.

Assistance for organic manure units

To promote the use of organic manure like vermicompost, coir pith compost, ordinary compost and FYM in coconut holdings, financial assistance @ Rs.20,000 per unit or 50% of cost of production is provided.

Integrated farming programme

Coconut Development Board had earmarked Rs. 24.30 crores for the Integrated Farming for Productivity Improvement programme during 2012-13. For the establishment of demonstration plots in seventeen states, Rs. 24.10 crore is earmarked and for setting up 100 organic manure units Rs. 20 lakhs was allocated for the financial year 2012-13. Board directly and in association with state governments could implement the LODP programme in 14,507 ha. and could establish 68 organic manure units (Table1).

Table-2. Direct Implementation of LODP (Statewise-2012-13)

Sl. No	State	Districts	Area (Ha)	No of Clusters	No of Beneficiaries	No of Palms
A. First year clusters						
1	Kerala	10	2709.00	99	7616	469176
2	Karnataka	5	840.48	18	1088	115110
3	Tamilnadu	3	844.46	27	1226	140321
4	Andhra	5	473.91	14	1111	70036
5	Orissa	3	207.00	4	825	36225
6	Maharashtra	2	527.98	25	1621	86101
7	W.Bengal	1	25.00	1	68	4375
8	Assam	2	42.13	4	710	7372
	Subtotal (A)	**31**	**5669.96**	**192**	**14265**	**928716**
B. Second year clusters						
1	Kerala	5	847.13	32	4522	128827
2	Karnataka	5	359.95	6	634	51503
3	Tamilnadu	3	455.94	15	836	79790
4	Andhra	5	277.24	9	645	41735
5	Orissa	1	50	1	97	8750
6	Maharashtra	2	203.65	7	440	31563
7	Assam	2	27.49	2	436	4811
	Subtotal (B)	**23**	**2221.4**	**72**	**7610**	**346979**
	Total		**7891.36**	**264**	**21875**	**1275695**

Programmes implemented through various state governments

Board had allocated Rs. 9.35 crores for the establishment of demonstration plots in 17 coconut growing states through the state agriculture/ horticulture departments. This includes the Kuttanad and Idukki package. It was planned to implement the programme in 3,301 ha. during the first year and in 4,193 ha. during the second year.

As per the schedule the programme was implemented in association with the respective agriculture/ horticulture departments in Kerala, Karnataka, Tamilnadu, Andhra Pradesh, Odisha, Maharastra, West Bengal, Goa, Gujarat, Andaman and Nicobar Islands Puducherry, Lakshadweep, Tripura, Nagaland, Arunachal

Integrated pest and disease control measures

Direct implementation of LODP in 2012-13

Table-3(a) Kerala

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	Kasaragod	389.46	15	930	68134
2	Kannur	416.49	15.00	945.00	76160.00
3	Kozhikkode	522.38	21	2143	90508
4	Malappuram	471.01	19	1477	82426
5	Palakkad	459	12	652	80304
6	Ernakulam	113.83	3	282	14760
7	Idukki	21.52	1	36	3079
8	Kottayam	96.63	3	242	16904
9	Alappuzha	196.81	9	836	33016
10	Pathanamthitta	22.23	1	73	3885
	Subtotal(A)	**2709.36**	**99**	**7616**	**469176**
B. Second year clusters					
1	Kozhikkode	160.79	7	939	24665
2	Malappuram	158.43	5	491	25979
3	Palakkad	125.39	5	275	21842
4	Alappuzha	384.3	14	2553	53804
5	Ernakulam (Kumbalangi)	18.217	1	264	2537
	Subtotal(B)	**847.13**	**32**	**4522**	**128827**
Total		**3556.49**	**131**	**12138**	**598003**

Pradesh, Assam and Mizoram in 4855 ha. during the first year and in 1,761 ha during the second year in 2012-13. Rs. 9 crore was expended for the same. Apart from this 36 organic manure units were established in Andaman and Nicobar Islands, Puducherry, Lakshadweep, Tripura, Nagaland, Arunachal Pradesh and Mizoram in association with the respective agriculture/ horticulture departments. Rs.7.2 lakhs was incurred for the same.

Integrated farming programme directly implemented by the Board

During 2012-13, Coconut Development Board directly implemented the LODP programme in eight states in 5,670 ha. during the first year and in 2,222 ha. during the second year through its head quarter, regional offices and state centers incurring Rs.10 crores.

Table-3(b) Karnataka

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	Chamarajanagara	227.68	7	320	33690
2	Chittradurga	117.2	2	128	17565
3	Mysore	55.35	1	66	7,407
4	Ramnagara	140	3	205	19650
5	Tumkur	300.25	5	369	36798
	Subtotal(A)	**840.48**	**18**	**1088**	**115110**
B. Second year clusters					
1	Chitradurga	57.88	1	84	8514
2	Mandya	51.62	1	77	7592
3	Mysore	59.88	1	98	8229
4	Ramnagara	118.57	2	195	16368
5	Tumkur	72	1	180	10800
	Subtotal(B)	**359.95**	**6**	**634**	**51503**
Grand Total		**1200.43**	**24**	**1722**	**166613**

Apart from this 32 organic manure units were set up in Tamilnadu, Andhra Pradesh, Odisha, Maharastra, West Bengal, Assam and Nagaland. Rs.4.86 lakh was incurred for the same. From the first year project, 9.28 lakh palms in eight states received assistance and during the second year 3.47 lakh palms received assistance. (Table-2).

In 2012-13, Board directly implemented the LODP programme in 7891 ha benefiting 21,875 farmers.12.75 lakh coconut palms from 264 clusters received assistance for following scientific management practices. During the first year of the project 14,265 farmers received the assistance for 9.28 lakh palms and during the second year 7,610 farmers received assistance for following scientific management practices of 3.47 lakh palms in 2,221 ha. Unlike the previous years, 2012-13 witnessed the short fall of organic manure supply.

Kerala

The novelty about the implementation of the programme in Kerala was that unlike the previous years, Board prioritized the newly formed in farmer collectives, Coconut Producers Societies in the implementation of its various programmes. Applications were invited from 10 districts exempting the three districts where the Replanting and Rejuvenation programme is being implemented. Even though 400 CPSs had submitted application, 99 CPSs

Table-3(c) Tamilnadu

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	Theni	53.91	2	65	9434
2	Thanjavur	704.66	23	1056	123317
3	Dindigul	85.89	2	105	15031
	Subtotal(A)	**844.46**	**27**	**1226**	**147782**
B. Second year clusters					
1	Theni	125.28	3	142	21925
2	Madurai	34.86	1	37	6101
3	Thanjavur	245.8	9	607	43015
4	Dindigul	50	2	50	8750
	Subtotal (B)	**455.94**	**15**	**836**	**79791**
	Grand Total	**1300.40**	**42**	**2062**	**227573**

Table-3(d) Andhra Pradesh

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	East Godawari	261.88	7	618	39485
2	Visakapatanam	25	1	50	4000
3	Srikakulam	39.02	1	86	4356
4	West Godawari	129.47	4	317	19279
5	Viziayanagaram	18.54	1	40	2916
	Subtotal (A)	**473.91**	**14**	**1111**	**70036**
B. Second year clusters					
1	East Godawari	69.01	2	168	11028
2	Guntur	44.91	1	95	6854
3	Srikakulam	124.12	4	276	17691
4	West Godawari	22.34	1	65	3537
5	Viziayanagaram	16.86	1	41	2625
	Subtotal (B)	**277.24**	**9**	**645**	**41735**
	Grand Total	**751.15**	**23**	**1756**	**111771**

Table-3(e) Odisha

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	Puri	50	1	119	8750
2	Ganjam	132	2	402	23100
3	JSPur	25	1	304	4375
	Subtotal	**207**	**4**	**825**	**36225**
B. Second year clusters					
1	Puri	50	1	97	8750
	Grand Total	**257.00**	**5**	**922**	**44975**

Table-3(f) Maharashtra

Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
A. First year clusters					
1	Sindhudurg	298.02	10	722	49140
2	Ratnagiri	229.96	15	899	36961
	Subtotal	**527.98**	**25**	**1621**	**86101**
B. Second year clusters					
1	Sindhudurg	203.65	7	440	31563
	Grand Total	**731.63**	**32**	**2061**	**117664**

were selected for the implementation of the programme in 2012-13. During the first year, the programme was implemented in 2,709 ha. benefiting 4.69 lakh palms and during the second year, the programme benefited 4,522 farmers from 32 clusters. (Table-3.a.)

Karnataka

The LODP programme was implemented in 1200 ha. in Chamarajanagar, Chitradurga, Mandya, Mysore, Ramnagar and Tumkur. 1,722 farmers from 24 clusters were benefited by this programme. (Table-3.b)

Tamilnadu

In 2012-13, the programme was implemented in 1300 ha. 2062 farmers from Theni, Madura, Tanjavur and Dindigul received the assistance for undertaking scientific management practices for 2.27 lakh palms. (Table-3.c)

Andhra Pradesh

In 2012-13 Board implemented the LODP programme in 751 ha. in East Godavari, Visakapatnam, Guntur, Srikakulam, West Godavari and Vijayanagari. 1,756 farmers in 751 ha.from 23 clusters were benefited by this programme. 1.12 lakh palms received assistance for scientific management practices (Table 3.d).

Odisha

922 farmers formed part of the LODP programme implemented by the Board in Odisha. 44,975 palms in 257 ha from six clusters from Puri, Ganjam and Jagadeeshpur district benefited by this programme (Table-3.e).

Table-3(g) West Bengal

A. First year clusters					
Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
1	North 24 Pargana	25	1	68	4375

Table-3(h) Assam

A. First year clusters					
Sl No	District	Area (ha)	Number of clusters	Number of beneficiaries	Palms (Nos)
1	Morigaon Dt.	14.90	2	291	2607
2	Karimganj Dt.	27.23	2	419	4765
	Subtotal(A)	**42.13**	**4**	**710**	**7372**
B. Second year clusters					
1	Nalbari Dt.	20.14	1	250	3524
	Darrang Dt.	7.35	1	186	1287
	Subtotal(B)	27.49	2	436.00	4811
	Grand Total	**69.62**	**6**	**1146**	**12183**

Maharashtra

Through the Thane office of the Board, LODP programme was implemented in 732 ha. in Sindhudurg and Ratnagiri district. 2061 farmers from 32 clusters received inputs for 44,975 palms in 2012-13 (Table-3.f).

West Bengal

Kolkata state centre of the Board implemented the cluster programme in 25 ha. in 24 North Parganas district. 65 farmers received the input for 4,375 palms (Table-3.g).

Assam

In 2012-13 Regional Office Assam implemented the cluster programme in 70 ha. in 6 clusters in four districts viz. Morigav, Karimganj, Nalbai and Darang. 12,183 palms of 1,148 farmers were benefited under this programme (Table 3.h).

India's present status in coconut production as world leader is the visible example to prove that the initiatives of the Board to improve coconut productivity are reaping success. As per 2010-11 statistics, India becomes the global leader in coconut production with 1,694.3 crore nuts. Remarkable improvement in India's productivity is also achieved with 8,965 nuts per ha. Let us hope that India will reach greater heights in coconut production in future.

Alzheimer's: Could coconut oil treat the illness?

Family tell of amazing results of natural remedy

Vrajlal Parmar, 68, from Harrow, Middlesex was diagnosed with the late stages of Alzheimer's in 2007. By the next year he no longer recognised even his daughter Rashi. Yet miraculously, just after two years, Vrajlal recognizes his daughter. His daughter believes it's due to the daily dose of coconut oil he takes to treat his illness because doctors say his condition is too advanced for conventional drugs.

"I lost my dad to Alzheimer's five years ago and I thought I would never get him back," said Rashi. "But somehow I have, and it's the most amazing thing. He missed my wedding because I was a stranger to him. Then three months ago he suddenly started asking for me again and recognising me."

But in 2007 Vrajlal, who lives with his wife Taramati, 64, began to behave strangely. Within a year he could barely do anything for himself. The real blow came when he no longer recognized his own daughter. Desperate for a cure, Rashi's brother Kal, 31, found a YouTube video posted by a doctor in Florida who was treating her husband's Alzheimer's with coconut oil. They decided to try it on Vrajlal, who now takes six tablespoons a day. "Within a month his mood completely changed," said Rashi. "He became calmer and relaxed."

The family is now campaigning for a full medical trial into the benefits of coconut oil, which is believed to encourage the body to produce organic matter to provide an energy source for brain cells. But Kal, who is making a film about his father's story, says: "We're certain this has helped Dad, so I know it can help others."

Source:www.mirror.co.uk

CPSs for energizing the coconut sector

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In spite of the fluctuating price trend, 2012-13 offered rays of hope to coconut farmers. The widely formed in Coconut Producers Societies is the best example to prove this true. Small and marginal coconut farmers have realized the potential in being united to overcome the crisis haunting the sector. In Kerala CPSs have been already formed in all the 10 districts where coconut is largely grown. The details of the already formed in CPSs in Kerala is given in Table-1.

When the intensity of coconut farming is taken into consideration, there exists the potential of forming more CPSs in the state. The number of CPSs already formed is comparatively very low when we take into account the area under coconut cultivation. It is anticipated that around 10, 000 CPSs can be formed in Kerala within the next 2-3 years.

Programmes implemented under the initiative of CPSs

Production of good quality coconut seedlings is the most important component in the productivity improvement programme. The existing and emerging demand cannot be met by the present production of seedlings done by government agencies or by the private parties. Keeping this in view, Board has facilitated many CPSs to procure good quality seednuts and many CPSs have come forward to avail this facility. It is a noticeable development that CPSs have already started nurseries and are equipped to supply coconut seedlings as per the members demand. These CPSs have also availed the financial assistance offered by Coconut Development Board too. Even though there were rare occurrences of CPSs collectively procuring inputs at far below than the market rate, this trend was not observed prevalently.

CPSs are actively cooperating with the FoCT programme of the Board, both in identifying youth for the training and also for availing the service of the trained FoCTs for undertaking harvesting as well as plant protection operations. Many CPSs have also availed the assistance of the Board and the state government in setting up organic manure units. Board hopes that more CPSs would come forward to make use of this opportunity. 99 CPSs have also become beneficiaries of the integrated coconut development programme implemented by the Board for productivity improvement (Table 3).

Even though Board made maximum efforts to encourage the processing and marketing of tender coconut water, the response of the CPSs was not hopeful. The lack of

Table-1. CPSs registered in the Board

District	CPS registered with CDB	Number of Farmers	Area Covered under CPS (in Ha)	Yielding Palms in CPS	Non Yielding Palms in CPS	Total number of palms in CPS	Production per year
Kasaragod	236	13820	18039.99	901225	141141	1042366	49288202
Kannur	189	10145	5161.30	642653	115939	758593	45746775
Waynad	1	51	32.40	4010	1800	5810	300000
Kozhikode	331	24625	7352.34	1445759	212259	1658018	73045052
Malappuram	236	16241	7699.51	1002534	105046	1107580	63651403
Palakkad	105	6515	2101.14	743379	91597	834976	53384429
Thrissur	322	21755	2881.02	1194888	236042	1430929	58206574
Ernakulam	73	5010	775.19	224868	64898	289766	7645710
Idukki	19	2044	365.70	77494	26523	104017	3664834
Kottayam	7	386	308.16	46220	11210	57430	1248085
Alappuzha	288	20321	4564.38	937911	333969	1271879	33681093
Pathanamthitta	4	233	33.62	10355	5717	16072	439402
Kollam	235	13449	12705.79	526871	162722	689593	18749408
Thiruvananthapuram	200	12616	7420.86	893160	198055	1091215	42649191
Total	**2246**	**147211**	**138985.96**	**8620129**	**1727224**	**10347353**	**44516827**

Table-2. CPSs that can be formed in various districts in Kerala

District	CPS registered with CDB	Total number of palms in CPS	Number of palms in the district	% of palms covered by CPSs	Scope for forming CPSs in Kerala(if 20% of the palms covered)	Scope for forming CPSs in Kerala (if 40% of the palms covered)	Scope for forming CPSs in Kerala (if 60% of the palms covered)
Kasaragod	236	1042366	10439800	9.98	473	945	1418
Kannur	189	758593	15811250	4.80	788	1576	2364
Wynad	1	5810	1840125	0.32	63	127	190
Kozhikode	331	1658018	22347325	7.42	892	1785	2677
Malappuram	236	1107580	19115075	5.79	815	1629	2444
Palakkad	105	834976	10592575	7.88	266	533	799
Thrissur	322	1430929	15693475	9.12	706	1413	2119
Ernakulam	73	289766	8115800	3.57	409	818	1227
Idukki	19	104017	3002650	3.46	110	219	329
Kottayam	7	57430	4936575	1.16	120	241	361
Alappuzha	288	1271879	6747300	18.85	306	611	917
Pathanamthitta	4	16072	2832375	0.57	141	282	423
Kollam	235	689593	9678200	7.13	660	1319	1979
Thiruvananthapuram	200	1091215	12499200	8.73	458	916	1375
Total	**2246**	**10347353**	**143651725**	**7.20**	**6236**	**12472**	**18709**

enough tender nut variety palms could be the reason for low enthusiasm of the CPS members. But it is worthy to note that some of the CPSs have ventured into tender coconut marketing. The tender coconut parlours in Techno Park, Thiruvanathapuram, Info Park, Kakkanad and at Mobility Hub in Kochi are a few examples. Apart from this in many districts CPSs are in the process of starting tender coconut parlours.

In Kerala, CPSs were designated as the approved agency for copra procurement at MSP rates. Around 54 CPSs across Kerala worked as procuring agency and availed the benefits of MSP to farmers. Many CPSs are unable to procure and store copra as per the stipulated conditions since they are not having the required infrastructure facilities.

None of the CPSs have actively come up to procuring, processing for value addition or marketing. CPS members have also not shown much interest in availing the KISSAN credit cards, for meeting their credit requirements. Board look forward for the CPSs initiating such ventures in future.

Coconut Producer's Federations

In Kerala 103 Coconut Producers Federations were formed and registered in the Board during 2012-13. Coconut Producers Federations are coordinating and directing the functioning of CPSs and is expected to actively involve in coconut processing for value addition. Since the CPSs are small collectives, it will be difficult for them to initiate processing and marketing as it requires huge working capital. But the CPFs with more than 1000 farmer members and 1 lakh coconut palms under its operational area can easily meet such requirements. The details of the CPFs formed in Kerala is given in Table 4. When we take into account the density of coconut farming in Kerala, a minimum of 1000 Federations can be registered in Kerala.

Table-3. Beneficiary CPSs of integrated farming for productivity improvement (LODP)

District	Number of CPSs	Area (ha)	Number of beneficiary members	No of Palms in the CPS	Amount expended for various activities (Rs in lakhs)
Kasargod	15	389.46	930	68134	68.13
Kannur	15	416.49	945	76160	76.16
Kozhikode	21	522.38	2143	90508	90.50
Malappuram	19	471.01	1477	82426	82.43
Palakkad	12	459.00	652	80304	80.30
Ernakulam	3	113.83	282	14760	14.76
Idukki	1	21.52	36	3079	3.08
Kottayam	3	96.63	242	16904	16.90
Alappuzha	9	196.81	836	33016	33.02
Pathanamthitta	1	22.23	73	3885	3.89
Total	**99**	**2709.36**	**7616**	**469176**	**469.17**

Table-4. District-wise details of CPF registered with Coconut Development Board

District	Number of CPFs	No. of member CPSs	Number of member farmers	Bearing palms (in lakhs)	Annual production in CPFs (nuts in crores)	Total annual production in the district (nuts in crores)	% coverage of CPFs in terms of total production
Kasaragod	9	138	9102	6.06	3.61	50.80	7.11
Kannur	7	104	6707	3.75	2.45	64.50	3.80
Wynad	0	0	0	0.00	0.00	4.80	0.00
Kozhikode	15	162	12531	7.20	4.14	85.20	4.86
Malappuram	15	145	10845	6.95	5.37	94.70	5.67
Palakkad	9	54	3361	3.72	2.16	49.30	4.38
Thrissur	15	183	13416	6.94	3.10	60.80	5.10
Ernakulam	4	47	3631	1.93	0.62	24.10	2.57
Idukki	1	10	1299	0.44	0.22	9.50	2.32
Kottayam	0	0	0	0.00	0.00	14.90	0.00
Alappuzha	14	149	12908	5.30	1.84	21.90	8.40
Pathanamthitta	0	0	0	0.00	0.00	13.70	0.00
Kollam	9	137	9277	5.13	2.28	42.70	5.34
Thiruvananthapuram	5	57	3405	2.15	1.26	57.20	2.20
Total	**103**	**1186**	**86482**	**49.57**	**27.05**	**594.10**	**4.55**

Some of the CPFs have expressed their willingness to start coconut nurseries and to work as training centers for conducting FoCT trainings. Federations can easily take up primary processing. Making copra, coconut chips, vinegar out of coconut water, coir and organic manure production and procuring coconut for exports are some of the initiatives that can be taken up by CPFs.

20 CPFs have already started the preliminary steps for installing modern copra dryers having the capacity to process 10,000 nuts per batch. If 100 copra dryers with this capacity is installed and its capacity is fully utilized 30,000 tonne good quality copra can be produced per year. When the farmers themselves are producing and procuring copra on a large scale, the choice of fixing the price of the produce will also bestow with them.

CPFS can also actively participate with the coconut procurement programme being implemented by the state government through Krishi Bhavans. In Kerala 250 Krishi Bhavans are presently procuring raw coconut on a higher rate and is supplying to Kerafed. But the programme is in crisis due to the lack of facilities for timely processing. This is a best opportunity that CPFs can explore by making infrastructure facilities for processing the procured nut immediately. This would make the outreach of the programme to the maximum possible area. The farmers of the area are assured a higher rate since the dehusked coconut is procured @Rs.16 per kg. Government of Kerala is also offering the CPFs an incentive of Rs.500 per quintal for procurement. CDB under its Technology Mission on Coconut is extending 50% of the project cost ie. upto Rs 6 lakhs for installing copra dryers.

Coconut Producer Companies

Farmers, CPSs and Federations are jointly in the offing to start Producer Companies. In Kannur and Palakkad the registration procedures are in the final stage. Board is targeting to form 10 Producer Companies during this financial year itself. It is intended to form Producer Companies in areas where coconut is available enough for processing and marketing. Board is hopeful that in every Taluk a Producer Company shall be formed. It is encouraging that the Government of India has earmarked Rs.50 crores in the 2013-14 budget as equity grant for Framers Producers Organisation.

Coconut Producers Company is the greatest dream come true of the coconut farmers. This would ensure the farmers to fix the price of their produce and also to produce, market and even export various value added coconut products complying with global standards. It won't be impossible for the Producer Companies working with professional management background to compete with corporates and multi national companies. Board is happy that CPSs, CPFs and Producer Companies are aspiring ahead. Board promises to extend all possible help to make the coconut farmers to achieve their goal.

Technology mission on coconut - A retrospection

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Coconut Development Board has been implementing Central Sector Scheme, 'Technology Mission on Coconut' (TMOC) since 2001-02 as a part of the ongoing programmes for integrated development of coconut industry in India and to address serious problems faced by the coconut industry in a strategic manner. The project has been formulated with a view to converge and synergize all the efforts through vertical and horizontal integration of existing programmes and to address the problems and bridge the gaps through appropriate programmes in a mission mode to ensure adequate, appropriate, timely and concurrent action. The programme aims at increasing the productivity of coconut to generate higher income at farm level, creating opportunities for product diversification and value addition, improving marketing infrastructure and market promotion of coconut & its by-products both in national and international markets in order to cope up with the present era of change and to make coconut industry more competitive. Under the Mission focused attention was given for the development and adoption of new technologies and their promotion especially in respect of insect pest and disease management, product diversification and market research and promotion.

The programme is implemented on project basis and consists of the sub components. Management of insect pests and disease affected coconut gardens, processing and product diversification, market research and promotion, technical support and external evaluation and emergent requirements on need basis. Efforts were made with focused attention on awareness creation and market promotion increased the demand and consumption of coconut and value added products. During the initial periods thrust was mainly on pests and disease management due to sudden outbreak of various pests and diseases and resultant problems. But at present there is a paradigm shift to product diversification and establishment of coconut based processing units. Since coconut and its byproducts have attained high demand recently, the scope for establishment of units for coconut products viz desiccated coconut, virgin coconut oil, spray dried milk powder, preserved and packed tender coconut water as well as shell charcoal and activated carbon have increased considerably.

The implementation of Technology Mission on Coconut programme by the Board has helped to solve production constraints to a great extent besides developing many technologies for product diversifications, byproduct utilization and their commercial adoption. Under the various sponsored research projects, Board has developed the technology for packed and preserved tender coconut water in association with DFRL, Mysore and the technology for virgin coconut oil, spray dried milk powder, coconut oil blends and coconut water beverages in association with CFTRI, Mysore which has been transferred to many interested entrepreneurs.

Kovai Agro Foods, a desiccated coconut powder unit based at Pollachi

Nexus Frozen Fruit Containers and Foods, a unit manufacturing ice cream cup out of coconut shell

Pure Tropics, a tender coconut water unit

The status

During 2012-13 Board has extended support for 96 projects under the scheme with an assistance of Rs.764.577 lakhs for 42 new projects and 54 ongoing projects under the four sub components of TMOC. This includes establishment of 29 new coconut processing units with infrastructure facilities worth Rs.33.635 crores and with a capacity to process 163.38 million nuts and 22,611 MT shells per year by extending financial assistance to the tune of Rs.6.259 crores for value addition and by-product utilization. This is 40.64 % higher achievement than the previous year. Seven virgin coconut oil production units with a capacity to process about 21.75 million nuts per year, 11 desiccated powder units to process 121.95 million nuts per year, One tender coconut preserving and packing unit having capacity to process 4.5 million nuts per year, two coconut oil units to process 15 million nuts per year, three ball copra units to process 1.83 lakh nuts per year one shell powder units having a capacity to produce 1800 metric tones per year, three shell charcoal unit to produce 4737 MT per year and one activated carbon unit with a capacity to produce 1200 MT per year have been established.Under the scheme for adoption of technologies for setting up coconut processing units back ended capital subsidy of 25% limited to 50 lakhs is provided for infrastructure development, establishment or modernization and up gradation of coconut based processing units.

One of the main focussed areas of the mission is Research and development in areas of management of pests and disease affected coconut gardens and processing and product diversification. The eligible institutions for taking up research projects are ICAR/ State Agricultural universities, State Agri./ Horti. Departments and private organizations having the capability for conducting research. Board has been continuously promoting research under various components through research institutions such as Central Food Technological Research Institute (CFTRI), Defence Food Research Laboratory (DFRL), Central Plantation Crops Research Institute (CPCRI), Kerala Agricultural University, Tamilnadu Agricultural University, Central Coir Research Institute, Central Institute of Fisheries Technology, etc.

Board has also supported various State Governments/ Agriculture/ Horticulture Departments in demonstrating/ adopting control measures for pests such as coconut eriophyid mite, Black headed caterpillar and diseases such as root wilt and bud rot. Board has also entrusted research studies to National Institute of Nutrition, Hyderabad and Amrita Institute of Medical Sciences, Kochi to address the health concerns arising out of coconut oil consumption.

Central Coir Research Institute (CCRI), Kalvoor, Alappuzha has been entrusted with research studies pertaining to development of machineries and techniques for composting tender coconut husk during 2007-08. Five machines namely; tender coconut husk slicer, hand operated chopping machine, power operated chopping machine, tender coconut husk shredder and mini beater has been developed and the commercialization of these machines are being taken up by RAIDCO and KAICO. Further, CCRI is undertaking projects on diversified uses of coconut wood and development of technology for preparation of particle boards & diversified products from tender coconut waste. The studies have revealed that coconut wood has the potential for being used as raw material for cellulose extraction, micro crystalline cellulose (MCC), lignosulphonates, bio ethanol, particle boards etc. At present, 48 research projects are ongoing under the various components of TMOC.

The major research projects being completed during the current year

The project Soil and plant health management through organic

recycling in coconut based production system sanctioned to CPCRI, Kayamkulam demonstrated location specific technologies for organic recycling aiming at developing sustainable organic production system in coconut growing areas and has developed low cost crop residue recycling systems to produce high quality vermi-compost and vermi-wash for soil health management in coconut based organic production system. The study has also assessed the efficacy of vermi-wash as bio pest repellant and as prophylactic agent for disease and soil health stimulant and also evaluated the feasibility of crop diversity management in organic coconut based production system through intercropping. All farmers in the project area are producing vermicompost and vermiwash using biomass available in their farm. The total quantity of vermicompost ranged from 2.25 to 3.5 tonnes in Tamilnadu, while it is 0.75-1.75 tonnes in Kerala. Vermiwash production ranged from 100 to 350 litres in Tamil nadu and 65-135 litres in Kerala

Another project field demonstration of integrated disease management technology for management of coconut leaf rot disease including bio control agent sanctioned to CPCRI, Kayamkulam has assessed and demonstrated the latest technologies (involving chemical and bio-control agents in a comparative manner) on integrated management of coconut leaf rot disease with farmer participation. Field application of Contaf, and talc based bio agents such as *Bacillus*, *Pseudomonas*, and *Trichoderma* were demonstrated to the farmers.

The component-wise expenditure of TMOC projects

Component	Expenditure 2011-12 (Rs. Lakhs)	Expenditure 2012-13 (Rs. Lakhs)
Pests and Disease Affected Gardens.	52.582 (15)	39.255 (12)
Processing and Product Diversification.	416.562 (63)	601.455 (67)
Market Research and Market Promotion	43.415 (10)	28.167 (8)
Technical Support, External Evaluation and Emergent Requirement	31.079 (8)	95.700 (9)
Total	**543.637 (96)**	**764.577 (96)**

The project synthesis and characterization of value added products from coconut oil" sanctioned to Indian Institute of Science, Bangalore focused on developing coconut oil based grease and metal cutting oils for commercial application and setting up of pilot plant for coconut oil based cutting fluids is under progress.

Development of nutrient management strategy for improving the health of the palm to build resistance to pests was undertaken by College of Agriculture, OUAT, Bhubaneshwar. The project has evolved a cost-effective nutrient management strategy for adoption in the IPM of major pests of coconut and for enhancing the production of healthy coconuts.

Tender coconut punch cum splitter and hand opener was development by Apex Design Center, Coimbatore. A refined punch cum splitter and tender coconut opener which can punch and split 300 to 500 tender coconuts per hour has been developed. The product has been launched and is available in the market @ Rs.4500.

A pilot study on development of a nutraceutical preparation using nut water was sanctioned to Amrita School of Pharmacy, Kochi wherein tender coconut water was fortified with different concentrations of guva extract, pomegranate juice and amla extract and analyzed for their nutraceutical properties. The formulation containing tender coconut water with 10% pomegranate juice and added vitamin C and ß –carotene was found to have high nutritional value, good acceptance as well as stability and antioxidant potential of 4 months. Pomegranate provided best fortification with good taste

Major research projects initiated by Board during 2012-13

A research Project under the component processing and product diversification namely development of Nutra coconut oil rich in ù-3 & ù-6 fatty acids and health protective phytoceuticals is sanctioned to CFTRI, Mysore. The project envisages to isolate nutraceutical concentrates and their aqueous mixture from flax, sesame, sunflower, cottonseed etc. and to fractionate these oils to isolate the ù-3 and ù-6 fatty acid rich glycerides and other phytoceuticals, incorporate the above two factors in to the coconut oil to develop a nutra-coconut oil. The study will also analyse the nutritional and stability aspects of nutra-coconut oil and shall prepare traditional snacks in nutra-coconut oil which will be studied for their chemical and sensory attributes.

Under the component management of insect pests and disease affected coconut gardens a project titled refinement of production technology of green muscardine fungus and participatory field validation of integrated biocontrol technology against rhinoceros beetle of coconut has been sanctioned to CPCRI , Kayamkulam with an objective to integrate and optimize biointensive pest management for the coconut rhinoceros beetle, oryctes rhinoceros linn using green muscardine fungus (*Metarhizum anisopliae*), *Orytes rhinoceros* virus and pheromone trap. It is further proposed to validate and assess the technology through farmer participatory large area demonstration in Alappuzha.

Under the subcomponent technical support and emergent requirement, a project entitled region based recommendation to improve coconut production in Tamilnadu through remote sensing and GIS' has been sanctioned to the Department of Remote sensing and GIS, Directorate of Natural Resource Management, Tamilnadu Agricultural University. The objective of the project is to map coconut growing areas region wise in Tamil Nadu through remote sensing and GIS techniques, to create soil database using GIS for coconut growing areas of Tamilnadu, to identify the soil based production constrains and to recommend ameliorative measures to augment coconut production in Tamil Nadu.

A project improving coconut production in Kerala using soil data through remote sensing and GIS techniques has been entrusted to Remote sensing and wireless sensor networks division, Amrita Viswa Vidya Peetham University, Coimbatore to identify and map the coconut growing areas of Kerala and the project is progressing.

Through TMOC, the Board has extended support for 480 projects since 2001-02 received from various institutions / enterprises with a total financial assistance of Rs.105.55 crores and amount of Rs.85.27 crores has been released to various State Governments, Research Institutions, Co-operative Societies, entrepreneurs, etc. to address the issues like; productivity improvement through management of pests and diseases, product diversification and by-product utilization and market research and market promotion. This was for establishment of 220 Integrated Coconut Processing Units with infrastructure facilities worth Rs.212.84 crores and with a capacity to process 1287.04 million nuts per year by extending financial assistance to the tune of Rs.37.417 crores for value addition and by-product utilization. An additional employment of one lakh man days per annum could be generated.

The Impact

The impact of the programme is that the Board could develop the technologies in collaboration with various research institutes for virgin coconut oil, defatted coconut powder, coconut water based vinegar, coconut water and milk based beverages like pinacolada, convenience based foods – nata-de-coco, jelly, chips, ready-to-eat sweet snack coconut bite, coconut lessi, coconut water based fruit juice, coconut honey from mature coconut, coconut whey proteins, coconut souffle, snow ball tender coconut, minimally processed tender coconut, automobile lubricant from coconut oil, coconut wood based joineries, particle boards, door frames etc. New products developed are coconut oil based bio-diesel, blended oil, machinery for ball copra making, refinement of packaging for snow ball, chips, minimally processed coconut, edible copra, handicrafts, tender coconut punching & shaping machine, utilization of tender coconut husk for making compost and hardboard and dehusking machine. Under the market promotional activities, Board could participate in various national and international exhibitions and fairs. The impact created is for trade facilitation, creation of marketing network and consistent growth in exports.

Future Thrust

The future thrust for the programme during the next five year plan is to give more emphasis on establishment of more coconut processing units for product diversification. Technologies are yet to be developed for diversified value added products from coconut and its by products. The other area is to attract investment in coconut processing sector, to take up studies on nutritional and health aspects of coconut products including clinical trials in collaboration with reputed research / academic institutions.

The farmers, farmer groups, entrepreneurs, manufacturers etc should avail the facilities extended by the Board to their advantage for catering to the growing domestic demand and emerging international avenues. In the current five year plan enhanced allocation for TMOC programme is also envisaged which would result in horizontal and vertical growth in the coconut economy in the country.

Technology demonstration and training

Sreekumar Poduval
Processing Engineer, CDB, Kochi

India is endowed with excellent resources for promoting coconut based industries especially in farm level processing. The potential in this sector has not been tapped to the fullest extent. Post harvest losses due to quality deterioration in storage, poor handling techniques and inefficient processing, lack of attention to quality and hygiene and poor packaging techniques are some of the factors hindering the development of coconut based industries.

To address these issues, the Board imparts training cum demonstration programs in coconut processing for self help groups, farmer groups, NGOs, Coconut Producer Societies/Federations, cooperative societies and individual entrepreneurs for upgrading their entrepreneurship development skills for optimum utilization of resources, adopting efficient processing techniques, usage of cost effective packaging systems, application of food safety management systems and maintaining desired product quality standards. The broader objectives of the training program are to impart leadership qualities and provide marketing tips, familiarize the participants on quality control and quality management systems being followed in food processing industries.

The training programs are broadly classified into three types: one day training on coconut convenience foods and minimally processed tender coconut, two day training program on production of coconut vinegar from matured coconut water, four day trainers training program for group leaders of coconut clusters, self help groups farmer groups, Coconut Producer Societies/ Federations/ NGO's, and agricultural officers from state agriculture departments.

Training in coconut chips making

During 2012-13, the Technology Demonstration Centre (TDC) has conducted the following training programs in coconut processing

Training program on coconut convenience foods

This training program is of one day duration and covers process demonstration for three types of coconut convenience foods – coconut chips, coconut biscuits or coconut chocolate or coconut burfi and coconut lemonade. Sessions on food packaging, quality standards, food safety management system and schemes implemented by the Board for technical and financial support for processing and marketing of coconut products are also covered in the training programme. The TDC has conducted 31 training programs on coconut convenience foods for entrepreneurs, Coconut Producer Societies, Federations, farmer groups, cooperative societies, NGO's and agriculture students covering a total of 550 participants from Kerala, Tamil Nadu and Maharashtra.

Training program on coconut vinegar

This training program is of two day duration and covers process demonstration for coconut vinegar production from matured coconut water. Sessions on food packaging, quality standards, food safety management system and schemes implemented by the Board for technical and financial support for processing and marketing of coconut products are also covered in the training program. The TDC has conducted 16 training programs on coconut convenience foods for entrepreneurs, Coconut Producer Societies, federations, farmer groups, cooperative societies, NGO's and agriculture students covering a total of 285 participants from various districts of Kerala and Tamil Nadu.

Training program on minimally processed tender coconut

This training program is of one day duration and covers process demonstration for minimally processed tender coconut. Sessions on food packaging, quality standards, food safety management system and schemes implemented by the Board for technical and financial support for processing and marketing of coconut products are also covered in the training program. The TDC has conducted training programs for entrepreneurs, Coconut Producer Societies, Federations, farmer groups covering a total of 45 participants from various districts of Kerala.

Production and distribution of planting materials

A thrust area of Board

Deepthi R
Technical Officer, CDB, Kochi-11

In a perennial crop like coconut palm which exhibits considerable genetic variations and is capable of being propagated only through seed, the selection and use of planting material of high intrinsic value assumes considerable significance. The palm contributes to yield for over 80 years and the full bearing capacity becomes known only 10 to 15 years after planting. If the planting material happens to be inferior in quality, the garden will prove to be highly uneconomical and a continuous source of loss to the grower. Since coconut culture involves substantial pre- bearing investment, greater emphasis must be given to the selection and use of the right type of planting material.

The coconut palm is a monocot and can be propagated only through seed. The fact that coconut is a cross fertilized palm and that it does not bred true, makes the selection of seed nuts and then of seedlings in the nursery all the more difficult and important. By means of a series of selection made at different stages, it is possible to eliminate poor quality seed nuts and seedlings. The age old apprehension that coconut has a pre bearing period of 6-7 years has proved to be a fallacy. Now it is scientifically proved and established that under good management practices, tall coconut yields within four years, the hybrids within 3-5 years and the dwarfs within 3 years.

Coconut Development Board is implementing the Production & Distribution of Planting Material programme with the objective of enhancing the production and supply of good quality planting materials. Board directly and in association with state governments is implementing various schemes for planting material production. Establishing regional coconut nurseries, production of hybrid seedlings, production of seedlings at DSP farms and financial assistance for private nurseries are a few of the programmes of the Board under this head. The year 2012-13 witnessed remarkable achievements in Board's programme on producing high quality seedlings.

Regional Nurseries

Board is implementing this programme with the equal participation of the state governments in Kerala, Tamilnadu, Odisha, Gujarat and Andhra Pradesh. During 2012-13, Rs.79.57 lakhs was utilized for producing 6 lakh seedlings.

Production of hybrids

This programme is implemented in the hybrid production units established in various states with the equal participation of state governments. Rs. 2.80 lakh was distributed to seed production units in Kerala, Karnataka and Tamilnadu.

Private seed production farms and nurseries

Even though government nurseries, DSP Farms of CDB and agriculture research institutions are producing coconut seedlings, the demand is not fully met by the seedlings procuded by these agencies. Board is extending financial assistance to private nurseries for filling the demand supply gap of planting materials. In 2012-13, 10 nurseries and seed production farms were established in the private sector. The second installment of subsidy was distributed to six nurseries during 2012-13.

Sowing of seednut at the DSP Farm of the Board

DSP Farms of the Board

The seven DSP Farms of the Board spread across seven states have produced above eight lakh seedlings during 2012-13. Apart from this, farmers were acquainted with intercropping and scientific management practices. A month long training in hybridization and coconut product manufacturing was also given to the farmers.

During 2012-13, Board could produce 25 lakh coconut seedlings through these programmes. For planting in 15,000 ha. Let us hope that the programmes of the Board will further safeguard the interests of the coconut sector.

Retrsopective and prospective plans of Export Promotion Council

A.V. Ramanathan
Consultant (Exports),CDB,Kochi-11

Coconut Development Board was declared as an Export Promotion Council to deal with all the products of coconut except coir and coir products with effect from 1st April 2009. Even though export related work was adopted by CDB rather late, due to sheer consistency, it has been able to bring the benefits of Foreign Trade Policy to all coconut products. Many new schemes commissioned after 2009 was extended to cover the coconut industry as well. With nearly 950 members, coconut export industry is set to reach a milestone of Rs 5,000 Cr by way of exports by 2017.

The various benefits that were provided to the sector in the form of benefits of the Policy and Procedure included, extending benefit of Vishesh Krishi Gram Udyog Yojana to coconut (08), coconut oil (15), coconut meal (23), coconut handicrafts (22), Focus product Scheme benefits to activated carbon (38), copra (12), tender coconut water (22), while Duty Drawback was available to all coconut products at 1% including 2% to coconut oil. All regular schemes like advance authorization, 3% Special EPCG Scheme and Agri Infra Incentive Scheme (10% benefit) were also available to the coconut industry.

The details of other on –going schemes with effective amendments carried out in 2012-13 are given below:

1. Export of Edible Oil in Chapter 15 of the ITC HS Code (PN 85/17-3-2008): Export of Edible oil figuring in Chapter 15 of the ITC HS Code has been prohibited until further notice. **Relaxations:** Export of castor oil; Export of coconut oil through Kochi port only; Deemed export of edible oil(as input raw material) from Domestic Tariff area to 100% EoU for production of non edible oil to be exported; export of oil produced out of minor forest produce even if edible oil, Fish oil freely permitted without any statutory restriction. **Result:** Export of edible oil with restrictions.

2. Export of branded edible oil up to 5 kg packaging to an extent of 20,000 MT through 13 EDI Ports (up to 30-9-2013) (24(RE-2012)/ 2009-14 dated 19th Oct 2012).

3. Centre permits import of Palm Oil under Open General licence (63(RE-2007)/2004-9 dated Dec 24, 2007). Kerala High Court prohibits import of Palm oil and unloading at Kochi port. Central Government bans import of Palm oil through any Sea port in Kerala. **Result:** Palm oil is banned for import through any port in Kerala.

4. Imports of Coconut oil (1513) and Copra (12) canalized and can be imported only through State Trading Corporation adhering to Para 2.11 of Foreign Trade Policy. Imports of Coconut Oil is subject to re-export within 90 days of landing – as per Appendix 30 A of Handbook of Procedures, Vol. I on the basis of Standard Input-Output norms relating to coconut oil. Copra's import is based on temporary norms provided by the norms committee of DGFT. The norms obtained is valid for a year (Para 2.11 of Foreign Trade Policy).

5. Palm oil import was conditioned on the basis of Tariff values allotted to various Palm Oils- Crude, RBD, and Palm kernel oil. Import is on open general liecence basis. Tariff values remained unchanged from 2005. From WTO bound duty of 300%, crude palm oil had a levy of 0% customs duty while RBD had a levy of 7.5% (Customs Levy).

The Changes in respect of Export and import Policy relating to Edible Oil (Coconut Oil) in FY 2012-13

1. Coconut Oil exports has been permitted through all 13 EDI Sea Ports, 3 Land Customs stations in Bangladesh, Nepal and Bhutan without any quality and packaging restriction (DGFT PN 32(RE2012)/ 2009-14 dated 5 Feb 2013) **Result:** Coconut Oil (15) can be exported in full container load of 20 foot and 40 foot (30 cubic meters or 60 cubic meters), or in standard shipping carton 50x58x33 Cm, linear low density polyethylene or high density polythene bags, drums,

HDPE bulk packaging, flexi tank for oil.

2. Export of branded edible oils up to 5 Kgs with a maximum price tag of US $1500/ tonne without quantitative limitations through 13 EDI Sea Ports. **Result:** This will help the coconut oil industry reeling under unstable prices.

3. Tariff value of palm oil was raised from US $ 447/tonne to US $ 802/ MT (customs(Non Tariff) Circular 8/2013 dated 23 Jan 2013) Notification 20/2005 Cus (NT) dated 1-3-2005 was changed effective 66/2012 dated 31-7-2012 (Tariff value change). **Result:** The price of palm oil was aligned with the international price.

4. The existing customs levy of 0% for crude palm oil was raised to 2.5% on revised value aligning with the international price and RBD Customs levy was retained at 7.5%. **Result:** Price parity advantage

Other benefits

1. ITC HS Code for coconut hookah was changed and is in receipt of Special Focus Products scheme eligible for 5% (96140000) **Result:** Change of ITC HS Code

2. Coconut shell based activated carbon has been brought under Focus Product Scheme (Appendix 37 D of Handbook of procedures, Vol I and is eligible for 2% duty free scrip (3802 10 00).

3. Agri infra incentive scrip (Para 3.13.2 of FTP) Any item figuring in Chapter 1 to 24 of the ITC HS Code is eligible for Agri infra incentive scrip equal to 10% of FOB value of agricultural exports (5% incentive scrip+5% VKGUY). (04) Coconut milk powder & other products) (08) coconuts (fresh and/ or dried, desiccated, tender coconuts (12) copra (22) tender coconut water (23) coconut meal.

Financial assistance to export sector through Banks

The pre-shipment and post shipment credit offered by banks has been streamlined and subvention in interest rates to the extent of 2% is available to exporters under the export credit programme. This benefit was available to the entire coconut industry during the 2012-13 fiscal. Value limit on duty free import of commercial samples is allowed up to Rs. 3 lakh per annum. Export Obligation under Advance Authorization Scheme enhanced from 24 months to 36 months without payment of composition fee and facilitation of trade through various Electronic Data interchange (EDI) initiatives namely, on-line filing, processing of various authorizations to reduce transaction costs and time was realised.

In order to make available capital at low costs to entrepreneurs External Credit Borrowings to individual enterprises were rationalized and simplified. Since coconut manufacturing sector was small and marginal, capacities were not increased as a result there was no deployment of capital. The units set up through Technology Mission on Coconut were not able to increase capacities in a big way. As a result production was utilized for domestic /home consumption, with little quantity available for making exports attractive in the new markets. Coconut sector was unable to utilize capital through SME Window in the Stock exchange due to the smallness of the sector.

3% EPCG of Capital Goods for the agricultural sector was not utilized during the fiscal, as capacity expansion, replacing state of the art machinery with obsolete machinery did not take place. The frequent devaluation of the Rupee in contrast to the Dollar (Exchange price parity) has been weakening the invoice price quoted by Indian manufacturers in Dollars. The plummet of the Rupee was around 20-22% since 2008.

Though government launched a scheme for distribution of subsidized edible oils in 2008-09, the distribution of imported edible oil through State Government through PDS Distribution Scheme by providing a subsidy of Rs 15 per Kg up to 10 lakh MT, the benefit of distribution went to oil which was imported. Board had taken up the issue of distributing Coconut oil through PDS with a 25% subsidy to be borne by Central Government at least during the next fiscal, and if this materializes, there will be considerable absorption of coconut oil through market intervention.

Board feels that with India emerging as the largest producer of coconuts, with 16,943 million nuts per annum overtaking Indonesia and Philippines, there is a need to surge to manufacture value added products which has important export markets occupied by Asia Pacific coconut producing countries. Philippines Coconut Authority which is under the Department of Agriculture is looking at investing over P 1.7 billion to boost export of Coconut products from Philippines to 100 new countries. 39 coconut

Export of Coconut value-added products during last 5 years (Rs in Lakhs)

Product	2008-09	2009-10	2010-11	2011-12	2012-13 (upto Jan 2013)
Raw Coconut	3,439.29	5,576.41	9,382.98	19,678.90	17399.00
Desiccated Coconut	458.88	464.16	952.69	2,435.28	1350.00
Coconut Oil	5,841.23	4,002.95	3,991.83	7,281.61	5,991.00
Coconut Meal	9.89	41.40	0.66	2.86	0.60
Coconut shell	183.91	304.00	73.74	267.15	230.17
Shell charcoal	2,449.39	2,429.53	3,019.59	7,497.21	553.00
Copra	5,598.63	9,147.36	9,493.52	11,552.22	7339.00
Activated Carbon	15,000.00	21,262.62	25,550.00	34,760.00	55000.00
Total	**32,980.50**	**43,228.43**	**52,565.01**	**83,475.33**	**92922.00**

products and byproducts were earning $ 1.96 billion in 2011-12 against India's Rs 834.75 Cr during the same period.

Coconut handicraft industry was not able to make much headway in exporting coconut shell based products in a big way, even though Geographical Indication Registry has recognized shell carving as a Geographical Indication of Malabar. In order to take full benefit, Board suggests that exporters who export shell craft products need to indicate their ITC HS Code no (4402 90 10) which is eligible for 1% Duty Drawback and 5% Vishesh Krishi Gram Udyog Yojana concurrently.

Prospective Plans

Present export of coconut value added product worth is valued at $ 2.9 billion for coconut oil industry, $ 2.2 billion (Coconut –fresh market), $ 0.3 billion (desiccated coconut market), $ 0.1 billion shell product market, 0.3 billion kernel product market and 0.3 billion husk market. In the case of coir industry, coir pith of the magnitude of 3 lakh MT valued Rs 300 Cr is the highest value producer while in 2002, it accounted for 10,000 MT of exports valued Rs 10 Cr.

In India, we have around 13,116 units manufacturing various coconut products which are mainly in the small scale sector. Only 16 activated carbon manufacturing companies are outside the SME based on the pattern of investment. They do not have economies of scale nor capacity increasing abilities.

While India stands first in capacity production of coconuts (16500 million nuts), we are far away from the third world countries in creating capacities. But technological competence remain unutilized to produce plethora of value added food products from coconut. Under TMOC, CDB has developed many technologies in processing. The external market for coconut products is under utilized by India.

There is a need for huge investment flow, capital formation, to create large capacities in the coconut sector by public/private sector so that value added products can be used to earn wealth through exports. CPSs, CPFs and Producer Companies be initiated by coconut producers who will utilize the buffer 40% of the coconut produced in India to produce value added products other than copra and coconut oil.

Virgin coconut oil has become active in the European Union due to its therapeutic qualities, skin and message capacities, used in functional food and cosmetic industry segments. India has only a feeble share of the virgin coconut oil market. Global trade in tender coconut is of the order of Rs 2250 Cr. The level of secondary food processing is very low in India considered to other coconut producing countries. In order to revive agricultural GDP, investment in agri infrastructure needs more Plan funds. Schemes which provide funds to set up manufacturing units need to be pooled so that big entities can be created.

India produces 900 MT worth desiccated coconut through around 80 units, while Indonesia (46,699 MT), Philippines (1,16,421 MT) and Sri Lanka (38,651 MT) have been able to command supply to various desiccated coconut markets through sustained production. Coconut, copra and shell powder are vital primary raw material inputs which needed to be used for value addition instead of exporting them without value addition, Coconut oil production in India does not commensurate with coconut production while Indonesia, second largest producer after India occupies 42% of the coconut oil global market. We have a foot hold only in activated carbon and we need to go overboard with capacity utilization. Unless we reset our capacity building, we may not be effective as an exporter country dealing in coconut products. The mantra should be product diversification, optimization of capacity build up, additional capacities for value added production and by-product utilization.

Parliamentary Secretary, Horticulture, Nagaland visited Board's MDIC at Delhi

Shri Neiba Kronu, Hon'ble Parliamentary Secretary for Horticulture, Government of Nagaland visited Market Development cum Information Centre, Coconut Development Board, Delhi on 16th April 2013. The Parliament Secretary was briefed about coconut cultivation techniques, prospects of coconut cultivation in Nagaland and the various government programmes for the development of coconut industry. The Minister was accompanied by Shri Thomas Thailu, Nodal Officer, Monitoring Cell, Department of Planning & Co-ordination, Government of Nagaland.

Scientific coconut management technologies, possibilities of intercropping and integrated farming were briefed to the minister. He was further briefed about the objectives and financial assistance under different developmental schemes of the Board, including new initiatives like FoCT, CPS formation, etc. for the benefit of the farmers, unemployed youth and SHGs, the association of Board in massive area expansion programme, seedling production, training to farmers and rural youth for successful cultivation of the crop in the State.

Shri Neiba Kronu and Shri Thomas Thailu at CDB MDIC, Delhi

Shri Neiba Kronu appreciated the efforts of the Board in the implementation of farmer oriented schemes and hoped that the farmers of Nagaland would be encouraged to avail the benefits of these schemes for improving rural economy of the State. Shri Neiba Kronu was received by the office staff befittingly.

An interface on Neera

Coconut Development Board convened a meeting with leaders of farmer movements attached to major political parties in Kerala on prospects of Neera at Kochi on 12th April 2013. The meeting started with a briefing by CDB officials on prospects of Neera and the initiatives of CDB in permitting Neera tapping and the proposed modus operandi conceived by the Board. Neera committee members Dr. V.K. Raju, Kerala Agriculture University and Shri. Babu Joseph, farmer representative, Neera Committee made presentations. Shri. T K Jose IAS, Chairman, CDB spoke on the need for permitting Neera tapping, the current price situation in coconut and the down fall of the sector owing to non remunerative prices. Chairman CDB also stressed the need for urgent initiatives in regard of Neera taking into account of the fact that the domestic economy will be totally open for ASEAN countries from April 2014 and the market will be flooded with such products from major coconut producing countries like Indonesia, Philippines, Srilanka and Thailand. Farmer representatives were apprehensive of how Neera tapping can be implemented in a foolproof manner. The framer movements suggested an Anand model functioning with active farmers and Neera technicians as stakeholders. Meeting arrived at the consensus that Neera should be taken out of the purview of Abkari act or else Neera should be given a separate definition in the Abkari act and Neera and toddy may be maintained as separate products. The meeting was attended by representatives from KAU, farmer movements of major political parties and officials of CDB.

Shri. T.K. Jose IAS, addressing the interactive session

Monthly operations in coconut gardens

May

Andaman & Nicobar Islands:

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

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

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

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

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

Karnataka: Continue irrigation and collection of seednuts from selected mother palms. Start preparing the nursery beds for sowing of seednuts. Nursery should be raised on well drained light textured soils

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

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

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

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

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

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

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

Market Review - March 2013

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Marketing Officer, CDB, Kochi

Highlights

- The price of milling copra and coconut oil expressed a mixed trend at all the major markets during the month under report.
- The international price of coconut oil expressed a downward trend during the month under report.

The month of March witnessed a mixed trend in the prices of copra and coconut oil at important markets in Kerala. The price of coconut at Nedumangad market remained steady through out the month.

COCONUT OIL

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

The monthly average price of coconut oil at Kochi was Rs. 6297/- per quintal. The price of coconut oil at Alappuzha market also moved in tune with the price behavior at Kochi market. The monthly average price was Rs. 6293/- per quintal at Alappuzha market and Rs.6530/- at Kozhikode market. The prices at Kochi, Alappuzha and Kozhikode markets were 6-8% lower than the prices prevalent in February 2013.

MILLING COPRA

The monthly average prices of FAQ copra recorded at Kochi market was Rs.4406/- per quintal. The monthly average prices of Rasi copra at Alappuzha market was Rs.4423/- and at Kozhikode market was Rs.4413/- per quintal. The prices at Kochi, Alappuzha and Kozhikode were 3 - 6% lower than that of the previous month. The minimum support price of milling copra has been fixed at Rs. 5250/- per quintal for 2013 season

The monthly average prices of milling copra at Ambajipeta market in Andhra Predesh was Rs.4100/- per quintal.

EDIBLE COPRA

The monthly average prices of Rajapur copra at Kozhikode market was Rs.4736/- per quintal, which was marginally lower compared to the price of the previous month.

The monthly average prices of ball copra at Kozhikode market averaged at Rs.4250/- per quintal.

The monthly prices of ball copra at APMC market Tiptur, in Karnataka averaged at Rs. 4757/- per quintal in March 2013 while it was Rs 5339/- in Bangalore and Rs. 4755/- in Arsikere.

The Minimum support price of edible copra has been fixed at Rs. 5500/- per quintal for 2013 season.

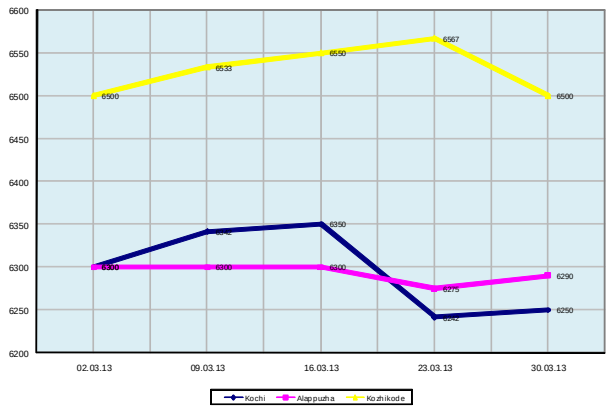
DRY COCONUT

The monthly average price of dry coconut was around Rs. 3999/- per thousand nuts at Kozhikode market which was marginally lower than that of the previous month.

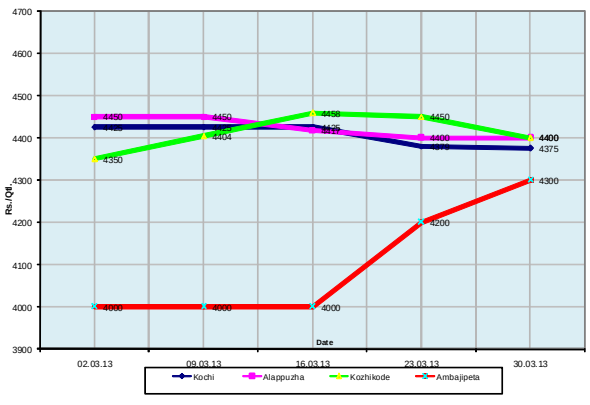
COCONUT

The monthly average price of Rs.7200/- per thousand nuts for dehusked coconut at Nedumangad market remained the same as that of the previous month.

Arsikere APMC market



Price behaviour of coconut oil during March 2013



Price behaviour of milling copra during March 2013

Monthly average prices of mature nut, tender nut and ball copra in North Eastern Region during March 2013

Products	Mature nuts (in Rs./ nut)	Tender Nuts (in Rs./ nut)	Ball Copra (in Rs./ Kg.)
ASSAM			
Guwahati	24	26	70
Nelbari	26	15	140
Nagoan	17	10	80
Sonitpur	25	18	150
Darrang	36	32	140
Karimganj	20	17	86
Silchar	20	25	160
NAGALAND			
Dimapur	23	16	110
MIZORAM			
Aizawl	50	50	NA
TRIPURA			
Agarthala	26	22	95

recorded an average of Rs.6,193/- for thousand partially dehusked nuts which was marginally lower than that of previous month.

The monthly average prices of partially dehusked coconut at Bangalore APMC market was Rs. 7,683 which was about 4 percent higher than that of previous month.

The monthly average price of partially dehusked coconut Grade-1 quality at Mangalore APMC market improved to Rs.11,000/- per thousand nuts which was about 9 percent higher than that of the previous month.

The monthly average price of coconut was Rs.25/- at Sonitpur and Rs.24/- at Guwahati in Assam, while it was Rs.50/- at Aizawl in Mizoram and Rs. 26/- at Agartala in Tripua.

TENDER COCONUT

The retail prices of tender coconut at Kochi market ranged from Rs.20 to 25/- per nut. The monthly average price of tender coconut at Guwahati in Assam was Rs.26/- per nut while it was Rs.50 at Aizawl in Mizoram and Rs. 22/- at Agartala in Tripura.

INTERNATIONAL PRICE

The monthly average price of US $815 per MT for coconut oil in Europe (C.I.F. Rotterdam) for the month of March 2013 was about 6 percent lower when compared with the price of the previous month and lower by about 41 percent compared to that of the corresponding month last year. The monthly average price of US$560 per MT for copra was marginally higher than that of the previous month and about 60 percent lower than that of the corresponding month last year.

The domestic price of coconut oil during the month of March 2013, in Philippines was US$781 per MT and in Indonesia; the price was US$801 per MT. The international price of Palm oil, Palm kernel oil (RBD) and Soybean oil were US$848, US$830 and US$1119 per MT respectively.

Market Price

Date	Coconut Oil			Milling Copra				Edible Copra	Ball Copra				Dry coconut	Coconut	Partially dehusked coconut		
	Rs./Qtl.												Rs./1000 nuts				
	Kochi	Alappuzha	Kozhikode	Kochi (FAQ)	Alappuzha (Rasi Copra)	Kozhikode	Karkala	Kozhikode	Kozhikode	Tiptur	Bangalore	Arsikere	Kozhikode	Nedumangad	Arsikere	Bangalore	Mangalore (Grade-1)
02.03.13	6300	6300	6500	4425	4450	4350	4000	4850	4350	4850	5400	4890	3450	7200	5800	8000	11000
09.03.13	6342	6300	6533	4425	4450	4404	4000	4825	4325	4877	5400	4872	3967	7200	6500	8333	11000
16.03.13	6350	6300	6550	4425	4417	4458	4000	4813	4317	4883	5400	4867	4150	7200	6500	7750	11000
23.03.13	6242	6275	6567	4379	4400	4450	4200	4642	4158	4717	5333	4682	4150	7200	5667	7333	11000
30.03.13	6250	6290	6500	4375	4400	4400	4300	4550	4100	4458	5160	4464	4280	7200	6500	7000	11000
Average	6297	6293	6530	4406	4423	4413	4100	4736	4250	4757	5339	4755	3999	7200	6193	7683	11000

Source: **Kochi:** Cochin Oil Merchants Association and Chamber of Commerce, Kochi - 2, **Kozhikode:** The *Mathrubhumi* daily **Alapuzha:** The *Malayala Manorama* daily, **Arsikere :** APMC, Arsikere
Price quoted for *office pass* copra at Kozhikode and *Rasi* copra at Alappuzha markets.