

COCONUT DEVELOPMENT BOPARD
APPROACH PAPER FOR THE 12TH FIVE YEAR PLAN

Introduction:

In India, Coconut is cultivated in 18 States and 3 Union Territories in an area of 1.9 million hectares. The annual production is estimated at 15730 million nuts (2008-2009). Coconut, predominantly a small holders' crop, occupies a prime position in the cultural, social and economic lives of millions of people across the world. Globally the crop has coverage of 12.16 million hectares and an annual production of 61.08 billion nuts spanning 93 countries. India is the second largest producer of coconut in the world accounting for 25.75% in production and 15.58% in area.

Coconut provides food and livelihood security and employment opportunities to a major segment of the rural population in India and many Asian and Pacific countries in the world. The crop contributes to more than rupees 83,000 million to the country's GDP and about 6 per cent to the edible oil pool. Similarly, the industry helps to earn foreign exchange to the tune of Rs13,000 million per annum by exporting coconut and coconut products. About 10 million people are dependent on coconut farming and its allied activities. Besides, coconut is a perennial source for raw materials to a number of other industries like oil milling, coir and coir based industries, Coconut processing and allied industries provides continuous employment to nearly 8 lakhs workers of which 80 per cent are women folk. There are about 5 million coconut holdings of which 98 per cent are less than 2 ha in size. Majority of the coconut holdings in the country are rain-fed and hence are susceptible to the vagaries of nature. The progress of the Indian Coconut industry is constrained due to the low scale of returns at the farm level on account of the influence of vagaries of nature and market induced uncertainties.

Coconut Development Board established in 1981, has been implementing various programmes for improving production and productivity in the beginning. Since India was lagging behind in technology development for product diversification and byproduct utilization, subsequently thrusts were given on technology development through sponsored research. Now the country is having many value added coconut products like desiccated coconut, coconut milk, coconut milk powder, coconut chips, virgin coconut oil, packed tender coconut water, shell charcoal, activated carbon etc. The concerted efforts of the Board could bring about perceptible improvement in area, production and productivity in the country for the past three decades. India is now positioned as the second largest producer of coconut with highest productivity in the world.

The Board is now trying to dovetail its future activities in such a way that the copra coconut oil nexus is minimized and more value added products including packaged tender coconut water is popularized in the domestic and international markets. Attempts will also be made to make available quality high yielding and early bearing variety of coconut seedlings to the farming community. Replanting and rejuvenation of old, senile and unproductive coconut gardens will be a priority area since the land for expanding the area under coconut has come to saturation, especially in the traditional states. The focus on expanding the crop in the traditional belts will be shifted to non traditional and disturbed areas of the country.

A. Productivity Enhancement of Coconut:

The productivity of coconut in the state of Kerala is very low & it ranks only at 9th position and far below the average national productivity of 8303 nuts per hectare. Hence it is the need of the hour for enhancing the productivity of coconut by implementing the ongoing programmes of replanting & rejuvenation as well as integrated farming like laying out of demonstration plot etc. in the state during the 12th five year plan.

State wise productivity chart:

Sl. No.	State/ Union Territories	Area ('000 Hectares)	% Share	Production (million nuts)	% share	Yield (Nuts/ha)
01	Lakshadweep	2.70	0.14	53.00	0.34	19630
02	Pondicherry	2.10	0.11	30.70	0.20	14619
03	Tamilnadu	389.60	20.56	5365.00	34.11	13771
04	West Bengal	28.60	1.51	355.50	2.26	12430
05	Gujarat	15.98	0.84	157.42	1.00	9851
06	Andhra Pradesh	104.00	5.49	970.00	6.17	9327
07	Maharashtra	21.00	1.11	175.10	1.11	8338
08	Assam	18.80	0.99	147.10	0.94	7824
09	Kerala	787.77	41.58	5802.00	36.89	7365
10	Orissa	51.00	2.69	275.80	1.75	5408
11	Karnataka	419.00	22.12	2176.00	13.83	5193
12	Goa	25.61	1.35	128.18	0.81	5005
13	A&N Islands	21.69	1.14	82.00	0.52	3781
14	Tripura	5.80	0.31	11.40	0.07	1966
15	Nagaland	0.92	0.05	0.55	0.00	598
	All India	1894.57	100.00	15729.75	100.00	8303

Source: Directorate of Economics & statistics, Ministry of Agriculture, Govt. of India.

The Board is making the target to make the productivity of Kerala to equivalent to that of Tamilnadu i.e. 3rd Position by the end of the 12th five year plan

B. Reducing the cost of Production of Coconut:

The cost of production of coconut particularly in Kerala is very high due to high labour & other input costs, low productivity etc and thus the profitability of coconut cultivation has been declining in the recent years. The cost of production may be reduced by community farming through Coconut producers' Society proposed during the 12th five year plan as well as by adopting good agricultural practices(GAP).

C. Promotion of Value added products of Coconut:

The Board is now trying to dovetail its future activities in such a way that the dependence of coconut on copra & coconut oil is minimized and more value added products including packaged tender coconut water, desiccated coconut, coconut chips, Coconut milk / milk powder, shell charcoal, activated carbon, etc are popularized in the domestic and international markets. Diversification of coconut byproducts & residual products to be taken up during this plan period.

D. Farmer Producer company(Coconut Producer Companies):

The Board proposes to register 5000 coconut producers' societies during the 12th five year plan. The CPS will be integrated to form a federation and the federations will be integrated to form 20-25 producer companies over a period of 5 years.

E. Development of New Technology of Coconut:

The Board proposes to develop new commercial & viable technologies on coconut through sponsored programmes with the CFTRI, CSIR & other research & educational institutes having the infrastructure & capabilities.

F. New Investment by the Coconut Industry;

The economically viable technologies will be transferred to the interested entrepreneurs for establishing coconut based integrated industries either by the individuals or by the producers' companies for making new investment in the coconut sector.

G. Enhancement of Export of coconut products & byproducts:

Since the Coconut Development Board has been declared as a Export Promotion Council by the Union Commerce Ministry, every efforts will be made to enhance the shares of the exports of the coconut products & byproducts in the coming years.

With all these in mind, the following strategies are proposed for the 12th five year plan period with the objective of making the Indian coconut industry globally competitive.

Traditional Projects of the 12th Five year plan:

A. Replanting and Rejuvenation of coconut gardens :

A pilot scheme for replanting and rejuvenation of coconut gardens has been sanctioned as a central sector scheme for the three districts of Kerala namely Thiruvananthapuram, Kollam and Thrissur since 2009-10 in an area of 1.33 lakh ha with a subsidy component of Rs. 474.5 crores from the Government of India. The main components of the programme is cutting and removal of disease affected, senile and unproductive palms and replanting with high yielding varieties and rejuvenating the existing garden in a period of two years. The project is having a spillover of one year for the first year of the 12th plan period.

Considering the significance of replanting and rejuvenating the coconut gardens in the state, it is proposed to extend the scheme in other districts of the state during the 12th plan period in the following phases.

Alleppey, Ernakulam, Kottayam and Pathanamthitta	- First phase
Malappuram, Kozhikode and Palakkad	- Second phase
Kannur, Kasargode, Idukki and Wayanad	- Third phase

A tentative budget allocation of Rs. 750 crores is estimated for the purpose. Considering the experience on the implementation of the pilot project, it is proposed to extend the period of operation for three years. A whole hearted participation from the Government of Kerala is solicited for successful of the Programmes.

B. Establishment of New Coconut Garden:

Though there is not much scope for expanding the area in the state, the massive cutting and removal of senile and unproductive palms warrants replanting and new planting to compensate the removal of palms. The subsidy presently being given in the scheme at the rate of Rs. 8000/- per ha is proposed to be enhanced to Rs. 30,000/- per ha towards 50% of the cost of cultivation. A tentative estimate of Rs. 100 crores is earmarked for the programme.

C. Integrated Farming- Laying out of Demonstration Plot :

Integrated farming in coconut holdings for productivity improvement has been one of the major programmes carried out in the state in the light of the fact that the productivity of the state is far below the national productivity and also in comparison with the neighboring states. It is proposed to continue this productivity improvement programme in the districts where replanting and rejuvenation is not implemented. The programme will be implemented on cluster basis as a farmer participatory one through the Coconut Producers' Societies.. It is proposed to earmark a budget of Rs. 50 crores for the programme.

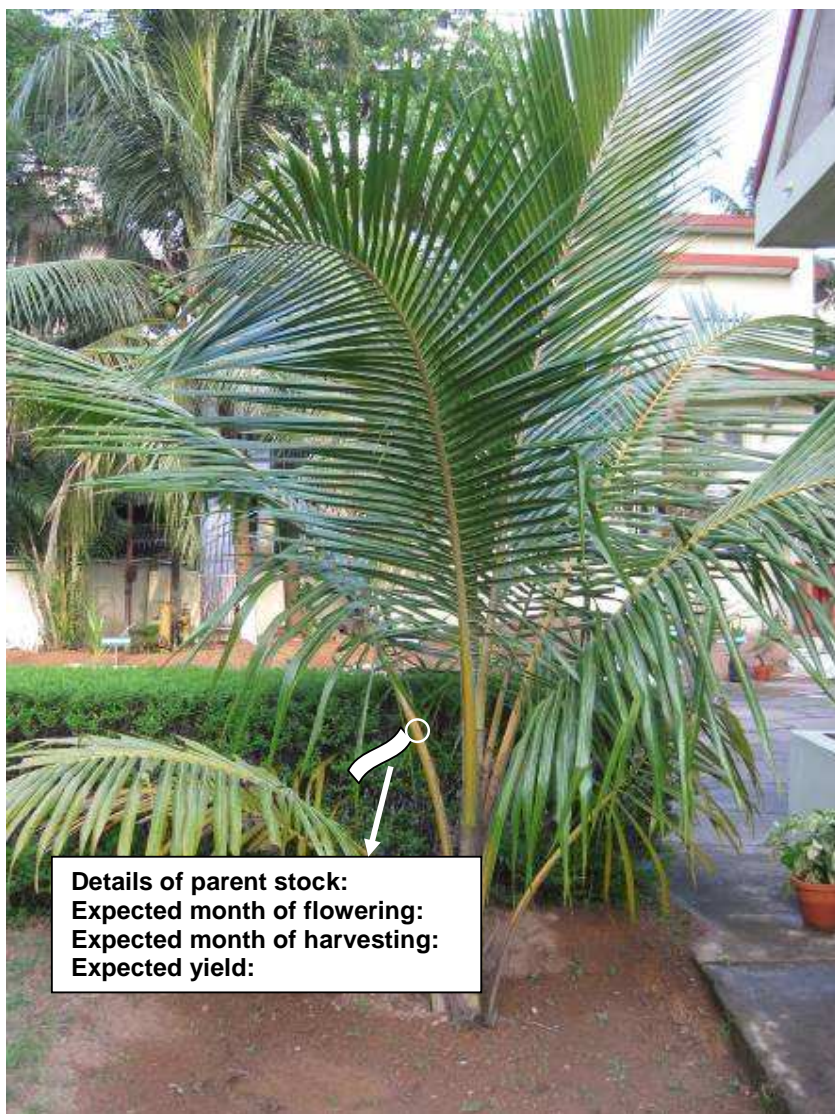
D. Production of Quality planting material of Coconut :

Improving the genetic potential of coconut will help to improve the productivity. High yielding new varieties have to be evolved and made available to the farmers for utilizing in the replanting and new planting programme. Production of quality/hybrid seedlings in the farmers field linking with CPS will help to meet the increasing demand for hybrid seedlings. During the 12th five year plan period the Board is planning to produce 250 lakh seedlings of various cultivars. The production is intended in the ratio of 25% hybrids, 35% dwarf and 40% tall varieties. Adequate coconut climbers will be trained and made available to compensate the dearth of coconut tree climbers for harvesting and hybridization purposes.

The year wise production of seedlings will be as given below:

Year	Total number of seedlings (in lakhs)	Hybrids (in lakhs)	Dwarf (in lakhs)	Tall (in lakhs)
Year 1	30	7.5	10.5	12
Year 2	40	10	14	16
Year 3	50	12.5	17.5	20
Year 4	60	15	21	24
Year 5	70	17.5	24.5	28
Total	250	62.5	87.5	100

Responsible Seedlings Initiative



All seedlings to be supplied to farmers should contain, details of: parent stock, expected month of flowering, expected month of first harvest and expected average yield, in order to ensure future productivity.

High Quality Seedling with a 'tag'

E. Technology Mission on Coconut:

Under technology mission on coconut, a number of projects were sanctioned during the 11th five year plan for development of value added products as well as research on coconut. The same project shall be continued during the 12th five year plan.

Coconut products and byproducts



Desiccated Coconut



Coconut Chips



Coconut milk



Coconut Skimmed Milk



Coconut cream



Coconut jam



Spray Dried Coconut Milk powder



Virgin Coconut Oil



Pinacolada
(coconut milk with pineapple juice)



Margarine



Coconut Flour



Coconut Cheese



Dietary fibre from coconut residue



Coconut Mayonnaise



Coconut Honey







F. Export & import of Coconut:

International trade, both import and export, plays a vital role in economic development of a country. The global competitiveness of a sector is truly reflected in the volume and value of trade achieved by a country in that sector. The trend of export and import of coconut products in India is not very encouraging. Even though India's export earnings from coconut and coconut products have been increasing at a compound growth rate of 12.40 per cent per annum, the rate of growth in the import of the products in the same period is 13.50 per cent per annum. Among the commodities in the export basket, coir and coir products account for the bulk of exports from this sector. Coconut oil and other coconut products make a very negligible contribution. This is mainly on account of the fact that the domestic prices of coconut products generally rule above the international price. Further, almost the entire production in the country is consumed in the domestic markets itself. However, since India, is a prominent coconut growing country with a production of 12833 million coconuts from 19.35 lakh hectares of coconut cultivation, there is a potential for exports, on account of the unique quality, aroma and flavour of Indian coconut. During the 11th plan period, there is 20-25% export growth. Hence there is huge potentiality for export of coconuts & coconut based byproducts particularly packaged tender coconut water, shell charcoal, shell charcoal based activated carbon etc.

Share in Export of coconut products from important coconut producing countries (in MT)

	India	Indonesia	Malaysia	Philippines	Sri Lanka	Thailand
Coconut	30602	72818	4149	1638	59199	24210
Copra	29525	39517	2569	84	8592	339
Coconut oil	5870	570311	128855	826237	1932	17886
Oil cake	214	209035	3011	399782	20007	1326
DC powder	900	46699	9448	116421	38651	1181
Coconut Milk powder	--	23264	3641	3723	10089	--
Shell charcoal	15523	199045	--	34747	3550	--
Activated carbon	38712	22741	17730	20027	17635	7023

G. Coconut Palm Insurance Scheme (CPIS) :

The Board is implementing CPIS on pilot basis in the state of Kerala from 2009-10 onwards. As per the scheme, individual farmer/grower having at least 10 healthy nut bearing palms for insurance in specified age group of 4-60 years for dwarf/hybrid variety and 7-60 years for tall varieties in a contiguous area/plot will be eligible for insurance. 50% of the premium cost is contributed by the Board and 25% of the premium is shared by state Governments and the balance 25% is borne by the beneficiary farmer. The premium per palm is Rs. 4.69 and for the younger age group and Rs. 6.35 for the older age group and the sum assured is Rs. 600/- and Rs. 1150/- per palm respectively. The tentative budget for the scheme is Rs. 15 crores.

The Kera Suraksha scheme was implemented on pilot scale from the year 2008-09 onwards. The scheme is implemented in the selected districts of Alleppey and Kozhikode in the initial years which was extended to the districts of Thrissur, Thiruvananthapuram, Kollam and Pathanamthitta. Now the scheme has been extended to all the trainees for coconut tree climbing under Friends of Coconut Tree.

New Projects Proposed during the 12th Five Year plan:

A. Formation of Coconut Producer Societies, Federation and Producer Companies:

The Board has been advocating the formation of Coconut Producer Societies by associating 40-100 coconut growers in a contiguous area with a consolidated minimum of 4000-5000 palms. The objective is socio economic upliftment of the farmers through productivity improvement, cost reduction, efficient collective marketing and processing and product diversification. It is planned to form 5000 societies in the 12th plan period. The CPS have to be provided with physical infrastructure for providing opportunities for value addition. The CPS will be integrated to form a federation and the federations will be integrated to form 20-25 producer companies over a period of 5 years. A farmer equity contribution to the tune of Rs. 360 crores is proposed to be mobilized. **A matching equity contribution is requested from the state Government as a one time assistance for making the CPS effective and successful.**

B. Mechanization in coconut farming :

It is proposed to intensify the development of machineries in coconut farming in association with Government aided and self financing institutes in order to ease the labour involved in cultivation, plant protection and pre and post harvest operations .

C. Collaborative Research :

Collaborative research through colleges, producer companies, agri based companies having capabilities and infrastructure is proposed to be undertaken in the areas of product development, biotechnology, mechanization, plant protection etc

D. Women in coconut:

Coconut, being a women friendly crop, more women entrepreneurship in coconut sector need be encouraged for empowering women in the sector. This will help bring social transformation, employment opportunities and income generation to women leading to Women empowerment.

E. Neera- Enabling Policy:

Policy decision/support for manufacture, processing and marketing of Neera by making suitable modifications in the Abkari policy is required. This will enable the farmers to realize maximum income from their produce and to make available a healthy non -alcoholic product to the public as well as development of much downstream value added products.

F. Utilisation of coconut wood:

About 6.5 lakh coconut palms have so far been removed from the 3 districts under the rejuvenation programme the wood of which was not properly utilized due to lack of processing industries. It is targeted to remove another 10 lakh palms during the current year. For the proper commercial utilization of the removed wood, processing industries need to be encouraged with financial support from the state.

G. Equity to Coconut producers Society:

The CPS have to be provided with physical infrastructure for providing opportunities for value addition. The CPS will be integrated to form a federation and the federations will be integrated to form 20-25 producer companies over a period of 5 years. A farmer equity contribution is proposed to be mobilized. A matching equity contribution is requested from the state Government as a one time assistance for making the CPS effective.

Innovative Projects:

A. Farmers' Partnered Hybrid Seedling Production:

During the 12th five year plan period, the Board is planning to produce 250 lakh coconut seedlings of various cultivars. The production is intended in the ratio of 25% hybrids, 35% dwarf and 40% tall varieties. These hybrid seedling production will be undertaken at the Farmers' field through the Coconut producers' Society. Adequate coconut climbers will be trained and made available to compensate the dearth of coconut tree climbers for harvesting and hybridization purposes. Beside this, the quality of the coconut seed/ seedlings may be assured by all concerned. The year wise production of seedlings will be as given below:

Year	Total number of seedlings (in lakhs)	Hybrids (in lakhs)	Dwarf (in lakhs)	Tall (in lakhs)
Year 1	30	7.5	10.5	12
Year 2	40	10	14	16
Year 3	50	12.5	17.5	20
Year 4	60	15	21	24
Year 5	70	17.5	24.5	28
Total	250	62.5	87.5	100

B. Precision Farming Technology on Coconut:

Precision Farming technology on coconut, as a package, is yet to be applied on commercial scale in the farmers' field. This may be implemented with the help of the existing Precision Farming Development Centre located mostly in the State Agricultural universities(KAU, Thrissur).Ultimate goal is to make available all needed information to the farmers so that they are in a position to apply necessary inputs.

C. Reducing dependence of Coconut to Coconut & coconut oil:

At present the prices of coconut is fully dependent on coconut & coconut oil .A drastic shift from the present product mix of copra and coconut oil to non copra and non oil production like desiccated coconut, coconut milk, coconut milk powder, ball copra, packed tender coconut water , activated carbon , shell charcoal etc is proposed to do away with the ill effects of violent price fluctuation of coconut oil which in turns affects the coconut prices .

D. Moving towards more hybrids & dwarf from Tall seedling Production:

At present more number of tall coconut seedlings are produced in the country. The Board is proposed to move towards more hybrids from tall and towards dwarf for catering the needs of the farming community during the 12th five year plan. The production of quality coconut seedlings may be assured from all concerned including state government.

E. Extension programmes :

Promotional activities being carried out in the state in order to create awareness on the goodness of coconut among the school children and youth like Ente Thengu programme will be intensified along with other activities

Conclusion:

The Coconut Development Board will be making all out efforts to formulate suitable programmes for the benefit of the coconut community of the state of Kerala with the limited infrastructures & offices in the state. It is having only one field office in Thiruvananthapuram besides Head Office at Kochi. Due to paucity of staff & field Offices, a whole hearted participation from the Government of Kerala through the Department of Agriculture is solicited. The Equity shares to the Coconut Producers' societies from the state Government is also requested alongwith seed quality assurance & policy support for the production of non-alcoholic Neera for ensuring better returns from the coconut farming in the state.

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