

Replanting and Rejuvenation Programme- A Much Awaited Intervention in Coconut Sector

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“**P**roductivity of coconut gardens in Kerala is less than one half of Tamil Nadu and even below the national average, despite Kerala being endowed with high rainfall and other favourable conditions for coconut cultivation. The poor management, the debilitating root(wilt) disease, the more recent eriophyid mite infestation and the extension of cultivation to agronomically less suitable areas such as upper slopes and hill tops are the major reasons for the low productivity. One quarter to one third of the tree stand is over aged. A massive programme to systematically replace old and low yielding palms with pedigree planting material during a period of 15-20 years was recommended. Such a programme should also aim to optimally utilize the land for maximization of income per unit land with scientific intercropping and mixed farming. This can be linked with the integration of production, processing and marketing, as components of maximization of income to the farmers”. This observation of the Commission on WTO concerns in Agriculture headed by Dr. M.S. Swaminathan in 2003 was timely and an eye-opener to policy makers.

Another committee headed by Dr. Ahammed Bavappa, Former Director, CPCRI, which looked into the reasons for low productivity in Kerala observed that coconut is the main stay of the people with the entire fabric of the rural economy closely

woven around the coconut palm. The productivity of Kerala is 7918 nuts per ha which is less than the national average and is around 50% of the productivity of neighbouring state of Tamil Nadu. 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. Measures like removal of old, senile and unproductive palms, gap filling, restructuring home gardens by adopting shade

regulations, removal of unwanted trees, in filling with selected economic species, soil and water conservation and water harvesting, irrigation, cultivation of compatible intercrops with integration of animals and fish, adoption of zero tillage technology and strengthening of organic base with legumes and bio agents, need to be integrated in coconut gardens as the rejuvenation strategy.

In coconut, there had been no systematic replanting and rejuvenation unlike other plantation crops like tea, coffee or rubber. Formulation of a Replanting and Rejuvenation project was mooted immediately after the visit of Shri. Jayaram Ramesh, the then Minister of State for Commerce & Industry on 12th October, 2006 for

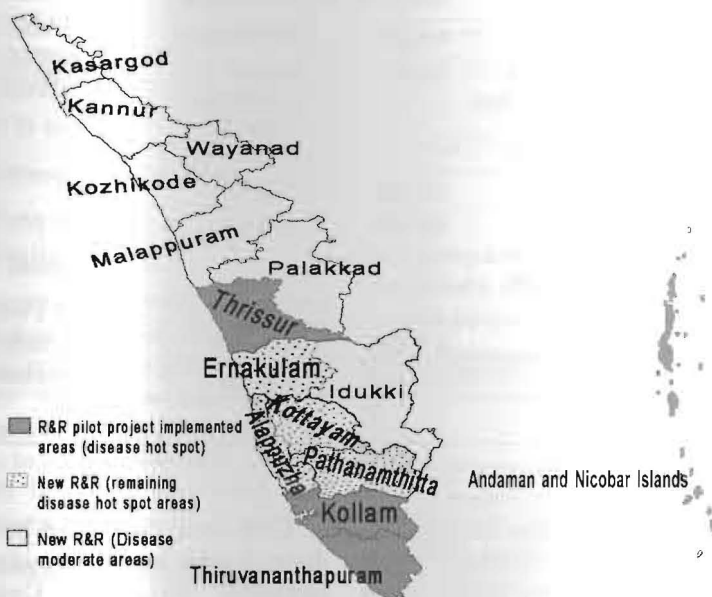


Table -2

Achievements under the Scheme 'Replanting and Rejuvenation of Coconut Gardens in Kerala and Andaman & Nicobar Islands' during 2009-10 to 2013-14.

State/District	Area (ha)	No. of Beneficiaries	No. of Palms removed	Cutting and Removal	Subsidy released (Rs in lakhs)	
					Rejuvenation	Re-planting
KERALA						
TRIVANDRUM	35626	256367	482523	2218.91	1959.3	36.01
KOLLAM	40033	266191	605972	2714.19	2080.69	24.35
THRISSUR	62158	196767	585278	2656.54	3006.28	20.74
Sub Total	137817	719325	1673773	7589.64	7046.27	81.10
A & N ISLANDS*	1786	-	2122	79.84	192.14	2.20
Total	139603	719325	1675895	7669.46	7238.41	83.30
G.Total						14991.17

project in other districts in Kerala and other major coconut growing states was strongly recommended in the report. The report also recommends modifying the compensation to Rs 500/- for all removed palms rather than categorizing the compensation in to two slabs of Rs 500/- & Rs 250/-. Need for creation of adequate awareness on the scheme through wide publicity, streamlining the supply of inputs, avoiding delay in subsidy settlement etc. were the other suggestions included in the report. Significant improve-

Table 3

Percentage share of Kerala in area and production of coconut in India 2010-11

Sl No	States	Area "000" ha	% Share in Area	Production (Million nuts)	% share in Production	Productivity (nuts/Ha)
1	Kerala	788	41.6	6239	36.83	7918
2	Karnataka	419	22.1	2340	13.81	5584
3	Tamil Nadu	390	20.6	5771	34.06	14796
4	Andhra Pradesh	104	5.5	1043	6.15	10024
	Total	1701	89.7	15392	90.85	
	All India	1895.9		16943		8937

Source : Horticulture Division, Ministry of Agriculture, Government of India

Thirissur. As announced by the GOI, Coconut Development Board is planning to extend the implementation of the scheme to all the remaining 11 districts in Kerala in a phased manner. It is important to implement the scheme in the remaining districts with high disease intensity and also in the border districts to manage the scope of spreading the disease to neighboring states.

The Way Forward

The mode of implementation of the project will be the same as approved by the Cabinet Committee on Economic Affairs, Expenditure Finance Committee and Ministry of Agriculture for the Pilot scheme. Some minor modifications are proposed from the experience gained from the pilot project. The cost of inputs has increased manifold during the last three years of project period and the scale of assistance under the Rejuvenation component is proposed to be enhanced to Rs 17,500/- per ha (in two equal annual installments of Rs 8750/- per year) in place of existing Rs 15,000/- per ha. Similarly the assistance under the component replanting was only Rs 20/- per seedling in the pilot project, where as at present seedling cost varies from Rs 80/- to Rs 150/- for quality dwarfs and hybrids respectively. Because of very low financial support, the rate of replanting undertaken by the farmers in the project areas was also very low ie, less than 20% only. Therefore the seedling subsidy rate is proposed to be increased from Rs 20/- to Rs 40/- per seedling.

Likewise, in place of clusters the Coconut Producers Societies and Federations will take the lead in implementation. Board has already facilitated the formation of CPS which are working effectively. The farmers in the

attending the Open House meeting of Coir Board. Need for increasing the coir export was discussed and in this context the Minister expressed concern over the declining coconut production in the country and more particularly in the state of Kerala. The reasons for low productivity of Kerala were also deliberated at length. By then the Government of India had already announced the massive replanting programme for other plantation crops like tea, coffee, rubber and spices. This paved the way for the announcement for a Replanting and Rejuvenation programme for coconut as well. This was the period when the Board was headed by Mrs. Minnie Mathew IAS, as the chairperson of Coconut Development Board. The Board had taken this offer as a challenge and submitted a project proposal for replanting and rejuvenation of coconut gardens in traditional states in 2006.

The project was initially formulated for all traditional states for a total cost of Rs.4766.66 crores with a central subsidy of Rs. 1358 crores. The project had thereafter undergone modifications, revisions, shuffling and curtailment on many occasions at Government of India's level. In 2009, the Cabinet Committee on Economic Affairs approved the project for implementation in 3 districts of Kerala and Union Territory of Andaman and Nicobar Islands on a pilot scale and the Minister of Agriculture communicated its approval on 1st May, 2009. The total cost of the project was Rs. 2,275 crores with a central subsidy of Rs. 478.5 crores. The project period stipulated was 4 years in 2009-2010. This coincided with the last 3 years of the 11th Five Year Plan, with a spill over year of 2012-2013. The

scheme in Kerala was formally launched by Shri Sharad Pawar, Hon'ble Union Minister of Agriculture at Thrissur, Kerala on 6th December 2009.

The main objective envisaged under the scheme was to enhance the production and productivity of coconut by the total removal of all old, senile, disease advanced and unproductive palms and the rejuvenation of the remaining palms in a mission mode with the following components:

- *Cutting and removal of all old, senile, unproductive and disease advanced palms followed by replanting.*
- *Rejuvenation of existing gardens through integrated management practices.*
- *Assistance for replanting.*
- *Implementation, Monitoring, Evaluation, Training etc.*

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/- per hectare was allowed to the farmers for cutting and removal of old, senile, disease advanced and unproductive palms. The cutting and removal of the palms is to be followed by a systematic replanting with a subsidy of Rs.20/- per seedling. The remaining palms need to be rejuvenated through proper management practices for which a subsidy of Rs.15,000/- per hectare is admissible in two annual instalments. The implementation of the scheme is to be physically monitored by a State Level Monitoring Committee under the Chairmanship of Agricultural Production Commissioner with members from Coconut Development Board, State Agriculture Departments and

Scientists from CPCRI and Kerala Agriculture University. Similarly the scheme is monitored by the Area Development Committee under the Chairmanship of the President of local bodies.

Procedural Formalities in Implementation:-

- (i) The programme has to be implemented in a farmer participatory mode in contiguous areas within Panchayats in identified Districts, for visible impact.
- (ii) Each ward in Panchayat is considered as a Cluster where farmers have formed themselves into a group.
- (iii) Each cluster should have an elected Cluster Convener and sub group leaders.
- (iv) A base-line survey has to be carried out in a farmer participatory mode covering all holdings in the project area. The palms for cutting and removal are identified by the farmers themselves and verified by the Cluster Convener and are inspected by the Agriculture Officer of the State Government/the Board's officials.
- (v) Based on the information in the base line survey, the officials of the Board facilitate the formulation of the project report by the clusters.
- (vi) The project reports of individual clusters are consolidated into one report at the Panchayat level/TCA/Municipal level by the local Agriculture Officer and presented to the Area Development Committee.
- (vii) The project report has to be recommended by the Area

Development Committee which is chaired by the President of the local Self Government Institution/ Tribal Council. The projects so approved by the Area Development Committees are consolidated by the Joint Director of Agriculture/ District Agriculture Officer and is forwarded to the State Level Monitoring Committee (SLMC) /any other Committee constituted by the State Government / U T Administration.

(viii) The Committee constituted by the State Government scrutinizes the project reports and forward to the Chairman, Coconut Development Board who, in turn accord administrative approval for implementation.

(ix) After the approval of the projects by the Chairman, Coconut Development Board, cutting and removal of the entire identified/ marked palms in holdings are undertaken by the clusters.

(x) For the rejuvenation programme, the clusters are linked to a credit institution for providing inputs.

(xi) Funds are released by the Chairman, after cutting and removal and replanting. The subsidy for rejuvenation is released to the credit institutions/manufacturers who have supplied the inputs on credit basis.

The total area targeted for Kerala was 1.33 lakh hectares and that for Andaman & Nicobar Islands was 2000 hectares. During the project period, an area of 1.37 lakh ha was covered in Kerala and 1786 ha in Andaman

& Nicobar Islands. Projects worth Rs 234.45 crores were approved by the Board for implementation in 3 districts of Kerala and Andaman & Nicobar Islands. Against this, Government of India has sanctioned Rs 156 crores and the Board had utilized Rs 150 crores. The total palms identified during initial survey for cutting and removal was 23.93 lakh. Against the marked palms 16:75 lakh palms which were actually found disease advanced, old and senile were removed. The subsidy provided for cutting and removal was Rs 76.69 crores. An amount

of Rs 72.38 crores was utilized for rejuvenating the palms in the project areas. Assistance extended for replanting was Rs 83.30 lakh for 3.36 lakh seedlings. So far 7.19 lakh small and marginal farmers were benefited under the project. As against the approved budget sanction of Rs 478.504 crores, Ministry has released only Rs 156.5 crores.

A midterm evaluation of the pilot project was done through Institute of Small Enterprises and Development (ISED), Kochi, Kerala to assess the efficacy of the pilot project. Replication of the

Total Projects Sanctioned for Kerala from 2009 to 2012-13 (Table -1)

	Cutting	Re-juvenation	Re-planting	Total
Phase-1				
TVM	1475.65	1260.15	67.41	2803.21
KLM	1161.17	928.071	39.93	2129.171
TSR	1406.06	1234.71	47.48	2688.25
<i>Sub-total</i>	4042.88	3422.931	154.82	7620.631
Phase-2				
TVM	1365.34	1403.52	26.85	2795.71
KLM	1455.26	1393.18	30.4	2878.84
TSR	1743.83	2117.01	28.56	3889.4
<i>Sub-total</i>	4564.43	4913.71	85.81	9563.95
Phase-3				
TVM	643.57	669.03	10.46	1323.06
KLM	893.72	860.38	20.41	1774.51
TSR	895.62	1966.98	12.19	2874.79
<i>Sub-total</i>	2432.91	3496.39	43.06	5972.36
	11040.22	11833.031	283.69	23156.941
District wise Abstract				
TVM	3484.56	3332.7	104.72	6921.98
KLM	3510.15	3181.63	90.74	6782.52
TSR	4045.51	5318.7	88.23	9452.44
G.Total	11040.22	11833.031	283.69	23156.941

project areas will be sensitized to form more Farmer Producer Organizations (FPO) / Coconut Producer Societies (CPS). These CPS's will be entrusted to undertake the activities in collaboration with the coordinating agencies (Panchayath, Department of Agriculture, Govt. of Kerala) so that the farmer participation in the implementation can be fully ensured. The area of implementation in each district will be selected in a phased manner starting from disease hot spot district and the districts bordering neighboring states. So far 2060 CPS's and 85 CPF's have been registered with Coconut Development Board in these 11 districts. The collectives will continue to act as major centers for providing sustainable

expertise in coconut which in turn will help the farmers to accelerate aggregation of produces, primary processing, increased farm level value addition and marketing of coconut products.

After the formation of the CPS/FPOs, farmer participatory baseline survey will be conducted covering all holdings in the project area. The senile, unproductive and disease advanced palms will be identified and marked and further verified by the concerned officials. Based on the baseline survey a detailed action plan will be prepared. Board will facilitate the preparation of the project report. The Area Development Committee chaired by the president of the Panchayath will recommend the project to the

Joint Director of Agriculture of the district and the district level projects will be forwarded to the State Level monitoring committee for recommendation to the Board for approval. After the approval of the project, the marked palms will be cut and removed and the claim for financial assistance will be submitted online after due verification by the FPO's, State Department of Agriculture and CDB. The inputs for rejuvenation will be procured on credit basis from public sector agencies as well as CPC's registered under CDB and distributed through FPO's. Quality seedlings will be distributed to the farmers based on the approved project and action plan. Financial incentive under the component 'cutting and removal' will be provided mostly through online fund transfer as per the national policy of fund transfer to farmers. Participating farmers will be encouraged to open bank accounts in collaboration with the nationalized/ scheduled/ commercial banks in the locality.

Conclusion

There is ample potential for increasing production and productivity of coconut in the country. It is not possible to replant and rejuvenate the existing gardens by the small and marginal farmers with out government support. The extension of the project is absolutely essential for increasing the overall production of coconut in the country. Unless a massive scheme to replant and rejuvenate the existing gardens in the traditional coconut gardens in the country is implemented, the productivity of coconut in the country can not be improved. The much awaited Replanting and Rejuvenation programme is before us to reap the harvest. ■

Root wilt

Root wilt is a debilitating disease which was reported in 1882 and the disease has spread to the entire southern districts of Kerala at various intensities. The disease, even after 130 years of intensive research is evading a perfect control measure.



The disease is debilitating and not causing instant death of the palms, but results in gradual decline in productivity. The recommendation of the research to farming community is to sustain the productivity of the palm through better management practices including irrigation. Juvenile palms and highly disease advanced palms, however, cannot be improved through management practices. At the same time, these palms serve as source of inoculum, if retained in the field. Therefore the strategy is to cut and remove those disease advanced, old and senile palms which yield less than 10 nuts per year.

A survey conducted in 1996 revealed that there were 80 lakh disease advanced palms in the stage of removal in Kerala. Despite the implementation of specific programmes for cutting and removal of root wilt disease advanced palms, a massive effort to remove all the affected palms was not initiated till 2008-08.