

Sustainable adoption of technologies on coconut in Tamil Nadu

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Introduction

An attempt was made to experiment the project concept in the field with the pecuniary and non-pecuniary support of the Coconut Development Board under the project Demonstration and Adoption of Technologies on Coconut through Participatory Planning and Action (2003), with the objective of enabling the coconut farmers for effective and sustainable adoption of productivity increasing on-farming technologies and productivity increasing off-farming technologies on coconut in a phased manner.

Agriculture continues to be the backbone of India's economy in terms of creation of employment, provision of resources and goods for markets in the secondary and tertiary sectors. The same is the case with Tamil Nadu, wherein 56.17 per cent of the population makes their livelihood from agriculture (*Government of Tamil Nadu, 2002*). Since the 10th Plan period, creation of employment in rural areas and maximizing the economic gains through export orientation in agriculture sector have been emphasized.

A close examination of agricultural resource base of the State indicates that each district/zone is endowed with one or more region specific agricultural resources. For instances, sago in Salem and Dharmapuri districts, cashew in Cuddalore and Perambalare districts, turmeric in Erode region, oil seeds in Tiruvannamalai region, palm products in Ramanthapuram and Thirunelveli regions etc., promote employment to 21- 32 per cent of people. (*Government of Tamil Nadu, 2000*). Despite their significance, they are in crisis primarily due to globalization and free trade policy. This necessitates the identification of specific

agricultural resources for massive employment creation and provision of livelihood security. In this context among various strategies, promotion of Production to Consumption Chain (PCC) through networking among various stake-holders of each agro-resource in the State is advocated.

Problem Statement

In the case of coconut, nearly 38-42 per cent of households (farming and non-farming) are employed directly or indirectly in the cultivation, agro-technical and entrepreneurial avenues on coconut including coir products. (*Government of Tamil Nadu, 2002*). It is one among the prominent Massive Employment Generating Agricultural (MEGA) resources in Tamilnadu. It contributes significantly to socio-economic development of the farming and non-farming households.

Although the State occupies second position in the production of coconut in our country, the benefits of the crop in terms of production gains, employment creation and export trading could not be reaped. More than 92 per cent of the coconut palms are monocrop (*Government of India, 1999*). Productivity increase by on-farming technologies on coconut is seldom adopted. Nearly 27.5 per cent of the palms died due



to non-adoption of appropriate drought mitigating technologies during 2002-04 (*Hindu, 2004*). About 62 per cent of the coconut growers are in debt-bondage. Value addition, processing and product diversification on coconut are seldom done (*CDB, 2003*). Less than 15 per cent of coconut growers take-up farm level processing. Large and small scale coconut based industrial units are in crisis due to lack of technology up-gradation on par with global standards. Out of 500 coconut oil mills (small and big) in Tamil Nadu, about 250 of the mills have discontinued their production (*CDB, 2004*). For instance, out of 48 coconut fibre industries in Dindigul district, 26 have stopped their production. Less than 15 per cent of coconut husks and coconut shell are utilised for value addition. Coconut/coconut products of the home country are losing their markets both within and outside the country; (*Coconut Development Board, 2004*). Coir pith which is a source of eco-friendly organic substance is left uncared for; instead dumped on the road side and burnt, causing environmental pollution. (*Hindu, 2005*) It is observed that there is a mass migration of marginalized and non-farm households in the coconut clusters. Employment generation potential of the crop is untapped. Yet, no comprehensive attempt has been made in addressing the above issues elsewhere in the state/country.

Project Concept

Our study on marketing of coconuts – practices, problems and prospects in Dindigul district (*GOI, 1999*) surveyed amply as a precursor to tackle problems

impinging on the adoption of coconut friendly technologies by farmers through ‘group approach’. A few experiments in developing countries have also proved the relevance and effectiveness of group approach through ‘micro institutional’ framework in addressing common problems of a community (*Adams, Dale W and Douglas, 1985*). Such micro - institutions have facilitated participatory planning and action in tandem to the overall social, economic and cultural framework of the society/the community (*World Bank, 2001*). Our experience also indicated that institutionalization of the group efforts by conferring corporate existence to the mission and objectives of the group through self-governance, would work. Moreover, since the effort is towards creation of production to consumption chain through self governing institutional networking, there is a need for collective groups and co-operative efforts among primary producers and their networking with various stakeholders of the coconut-resource at primary, secondary and tertiary levels with export orientation. More specifically, identification and elimination of science and technology intervention gaps impinging on the productivity, increase in production, processing and value addition on coconut; building up organic links between primary, secondary and tertiary sectors on coconut; developing human resources with marketing orientation; and extension of continuous knowledge support for both acquisition and enrichment of the entrepreneurial competitive skill,

leading to developing an integrated model for sustainable development of coconut for massive employment creation and provision of livelihood security need to be envisaged.

The Approach

- **Area-Cluster Approach** is advocated to fill in the gaps in Science & Technology intervention, HRD and entrepreneurial development on coconut.
- Integrated networking model for sustainable development of coconut economy as outlined in **chart 1** through which the producers and consumers could create a win-win situation on each synergising the other for greater networking on livelihood opportunities in the coconut location and beyond, is designed for a coconut geo-cluster covering about 10-15 per cent of the coconut community.
- Execution of the concept could be in two phases, each with a temporal space of three years. Phase I may have thrust on social engineering, empowerment and capacity building of the coconut community and phase II with a thrust on HRD, entrepreneurial and trade developments on coconut.

The Process

As the model aims at convergence of primary, secondary and tertiary sectors of coconut through backward and forward institutional networking among a variety of stakeholders viz., coconut growers, coconut workers, entrepreneurs etc., on coconut, the following process has been evolved.



- Promotion of self help associations among coconut growers with the thrust on adoption of farming technologies on coconut and primary processing, collective bargaining and contract farming.
- Promotion of self help associations among women (coconut workers) in the non-farm sectors with the thrust on employment creation through

adoption of technologies on product diversification, value addition and processing of coconuts.

- Promotion of federation of self help associations of coconut growers and coconut workers (women) with the thrust on creation of common infrastructure and services, and creation of network marketing with export orientation.

- Creation of knowledge support centre at the lead institution for continued dissemination of knowledge/technologies on coconut through multi-module style, using information technology towards establishing coconut based-knowledge support information centre in the district/region.

Integrated Development of Coconut

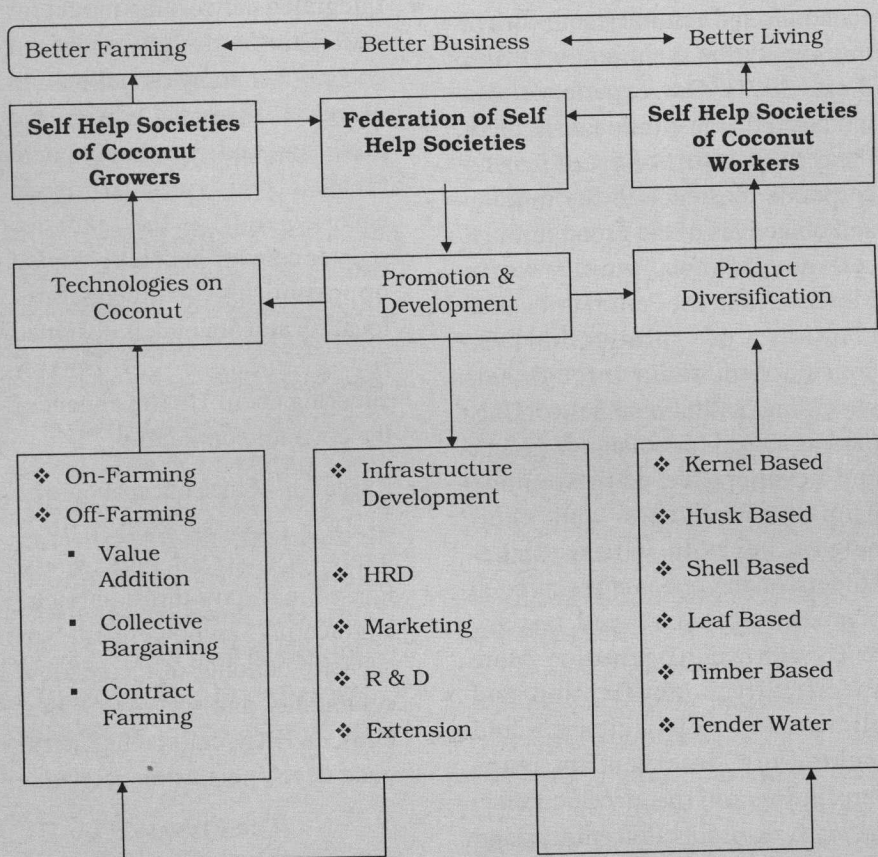


Chart 1 - Conceptual model

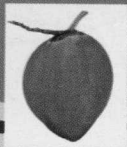
Field Experimentation

An attempt was made to experiment the project concept in the field* with the pecuniary and non-pecuniary support of the Coconut Development Board, GOI, Kochi under the project Demonstration and Adoption of Technologies on Coconut through Participatory Planning and Action (2003), with the objective of enabling the coconut farmers for effective and sustainable adoption of productivity increasing on-farming technologies and productivity increasing off-farming technologies on coconut in a phased manner**. This paper is devoted to present a summary of the project implementation process, and the major outcome pertaining to the demonstration and adoption of technologies on coconut particularly the cultural technologies, carried out during 2004-2007.

As for transfer of cultural technologies on coconut the

* Dindigul District in Tamil Nadu South India, is one among the prominent coconut growing districts/regions wherein the coconut crop is grown in nearly 18,021 ha., which forms 11.21 per cent of the total irrigated land area under cultivation. In the district, the crop is intensively cultivated in a few blocks viz., Authoor, Reddiarchatram, Nilakkottai, Palani and Sanarpatty blocks. A coconut geo-cluster spread in Authoor and Reddiarchatram blocks comprising ten revenue villages has been considered for field experimentation.

** Formation and promotion of self-help societies, participatory planning and action through micro plans pertaining to adoption of on-farming technologies by individual farmers, etc., can be clustered under the thrust activities for the Phase-I, with a time spell of 15 months. Thrust activities under Phase-II spread over appraisal of the marketing practices and problems, micro planning for common property and infrastructure development, facilitating adoption of off-farming productivity, increasing technologies on coconuts including formation of federation of coconut farmers as a nodal agent facilitating sustainable development of coconut farms.



following methodology was designed and executed.

- Identification, formation and promotion of self-help societies among coconut farmers,

concept of Self Help Societies (SHS) which are micro-organizations with a legal base and corporate existence. Over several meets of core-group, guidelines for identification, selection and admission of



Formation of Self-Help Societies

- Enlightenment and empowerment of members of the self help societies through self-governance,
- Participatory learning and pre-appraisal of the practices and problems in the adoption of coconut cultural technologies,
- Designing and execution of need based programmes for knowledge transfer on cultural technologies, and
- Participatory micro planning and execution including monitoring the pattern and extent of adoption of cultural technologies.

Promotion of Self Help Associations among Coconut Farmers

The coconut farmers in the project area were sensitized to the

individual farmers into the membership, management and administration, ways and means of resource mobilization, designing operational procedures, code of conduct, and the rules etc., in tandem to the statutory provisions (Societies Registration Act 1975 and rules 1978, Tamil Nadu) were evolved. As the core groups were very keen on the quality considerations of individuals, they expected lesser number of farmers on each group – not exceeding 20 – 25 in their locale.

Attempts were made to promote 16 self help societies among coconut farmers; more than one-third of them were inclined to take interest in the adoption of on-farming productivity increasing technologies by availing the services of their self help societies. At the same time they seemed not to appreciate adoption

of off-farming productivity increasing technologies by building up common properties with their societies. Further more, a few leaders found to observe a ‘trade union’ attitude by mobilizing in-support with the ulterior aim of availing the benefits of the government scheme. Hence in order to circumvent a possible move in this direction, a check list was administered for identification of self help societies whom they would want to continue to ‘work with’. As a result, this strategy culled out only 10 of these societies who proved themselves to be genuinely motivated to carry out the activities falling within the objectives of their ‘association-ship’; therefore, these met the eye to pick up for furtherance and promotion.

Pre-appraisal of the cultural practices

The fact-finding from Preferential Ranking Exercise (PRA) indicated the existence of senile and unproductive palms, inadequate/dearth of water for irrigation, lack of knowledge and facilities for preparation of compost, organic manure, lack of knowledge on pest and disease control practices, lack of knowledge on intercropping in coconut farms, non-adoption of integrated coconut farming, low productivity of palms, and non-availability of investment and production credit from organized sources etc are the problems of coconut farmers.

The field survey and the statistical analysis indicated that demographic, socio-psycho traits, economic and coconut farming indicators such as area under coconut cultivation, number of



palms possessed and type of cultivation have a direct bearing on the adoption of on-farming technologies on coconuts among farmers. Further, the survey analysis

farming productivity increasing technologies were spelt out for the benefit of all members of self help societies. Experts from Agricultural Research Institutions, NGOs,

coir pith compost, organic recycling and enriched farm yard manuring, integrated pest and disease control, mixed cropping and bee keeping in coconut gardens was created among



Discussions in the workshop

pointed out that knowledge of improved cultural practices in coconut farms has a positive correlation with adoption of improved cultural practices, without a significant effect.

Thus, the inferences from PRA and the short survey as applied to members of self help societies helped to identify the problems impinging on the adoption of cultural practices. They provided a guideline to the kind of strategies to be adopted by means of designing and executing an appropriate 'need based programmes' for knowledge transfer of cultural technologies on coconuts to farmers, and initiating measures towards strengthening the capability of self help societies to address economic problems of members as well.

Knowledge transfer on cultural technologies on coconut

In consonance with the needs and requirements of coconut farmers, a few training programmes on on-



Learning through practice

freelancers and adopters of cultural technologies on coconut were invited to actively participate and deliver the goods. Field exposure visits were also arranged. Discussions at the class room and demonstrations at the farm - field were organized. More specifically, awareness on relevant technologies on soil fertility management, water and drought management, vermi and

the farmers. Furthermore, this was strengthened by providing each society with flex print photographs, handouts and brochures, dovetailing methods and result demonstrations of technologies to be adopted by their members.

Participatory micro planning and execution

Workshops were organised as a



Micro Plan presentation



next step for the preparation and adoption of microplans. The members of the society were

dependability of irrigation sources, access to facilities including resources at their disposal and

for discussions. It was observed that they were able to find the right type of actions and solutions for a few common problems through their self help society.



Review of the micro plan

oriented to determine their choice of technologies, with a thrust on adoption of on-farming productivity increasing technologies in the context of establishing 'zero cost coconut cultivation' keeping in view the following broad guidelines.

- Adoption of scientific methods for '*in situ*' moisture maintenance and irrigation management
- Adoption of organic farming and gradual withdrawal from inorganic farming practices
- Intercropping in coconut gardens, and
- Adoption of integrated coconut farming system

Accordingly, members have identified and picked a few technologies for adoption, keeping in view of their micro environment comprising soil type, adequacy and

urgency of the situation as felt by them. Finally, the executive members of each society were guided to knit a comprehensive detailed micro plan from the individual plans of their members. Case analysis of a few members who needed special and consistent motivation were also prepared. The self help societies were allowed to carry out execution and monitoring of their individual micro plans. In order to ensure for an orderly execution and monitoring of the micro plan among the fellow members, the executive members were motivated to guide, counsel and review the performance of each member with respect to adoption of technologies by holding frequent review meetings and focus group discussions. Difficulties/deviations in the execution of micro plan by the society concerned were brought-up

Adoption of Cultural Technologies

Table-1 depicts details of the adoption of on-farming productivity increasing technologies by members of self help societies during a time span of three years (2004-2007). The number of cases (farmers) were 194. During execution of micro plans by the self help societies, it was observed that increased adoption has been found on water/drought management particularly adoption of basin/trench method of irrigation, mulching under the palm basin for *in situ* moisture maintenance and avoiding inter-ploughing in coconut gardens. It is learnt that these technologies were adopted immediately after imparting training and demonstration, since there was scanty rainfall during north-east monsoon in the year 2003-04 (there was 30 - 55 percent decline in the rainfall over the previous year 2002-03 and the district as a whole witnessed a mass death of over five lakh coconut palms for want of irrigation). Moreover, majority of them have adopted more than one operations pertaining to soil fertility management and intercropping. A few have taken bee-keeping in their coconut farms. Also, cocoa has been introduced as an intercrop in coconut gardens in the district. The members of self help societies who adopted cocoa earn its credential as innovators. Decline in NPK application was found.

As for intercropping, less than 30

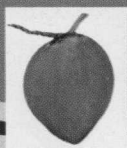


Table - 1 Adoption of On-farming Technologies on Coconut

Sl.No.	Farmers (N = 194) Technology	Non Adopters		Adopters
		Up to March 2005	Up to March 2007	
1 Soil fertility management				
• Application of FYM		094 (048.45)	022 (11.34)	172 (088.66)
• Application of green manure		—	—	194 (100.00)
• Raising cover crops		147 (075.77)	055 (28.35)	139 (071.65)
• Application of NPK		045 (023.20)	165 (85.05)	029 (014.95)
• Application of vermi compost		179 (092.27)	099 (51.03)	095 (048.97)
• Application of coir pith compost		159 (081.96)	045 (23.09)	149 (076.80)
2 Water/drought management				
• Basin/trench irrigation method		—	—	194 (100.00)
• Avoid inter ploughing		—	—	194 (100.00)
• Mulching in the palm basins		009 (004.64)	—	185 (095.36)
3 Plant protection				
• Application of neem cake		084 (043.30)	015 (07.73)	179 (092.27)
• Palm and weed cleaning		015 (007.73)	—	179 (092.27)
4 Inter-cropping				
• Fodder crops		141 (072.68)	120 (61.85)	074 (038.14)
• Others		114 (058.76)	094 (48.45)	100 (051.55)
5 Integrated farming				
• Milch animals		169 (087.11)	099 (51.03)	095 (042.00)
• Goat / sheep		184 (094.85)	160(82.47)	034 (017.53)
• Bee keeping		169 (087.11)	129 (66.49)	065 (033.51)

Figures in brackets are percentages to row total

per cent of farmers raised fodder crops, and another 9 per cent raised banana, vegetables, etc., on a very limited basis. Because of lack of knowledge about intercrops that can be raised in the inter- space in coconut gardens, narrow inter-space between palms due to dense planting and absence of farm fence and farmstead***, they have resorted to non-adoption of intercrops in their coconut gardens. Moreover, the farmers seemed to have switched over to coconut cultivation as a means to check the escalating cost of cultivation particularly the cost of

farm labour incurred in raising short duration/seasonal crops. Therefore, coconut farmers, who knew something about intercropping in coconut gardens turned a blind eye to such technologies. Adoption of integrated farming appeared to have lost-lustre among coconut farmers, only a less percentage (ranging from 17 to 42 %) have been rearing milch animals, goat, sheep, etc. However, majority (78 %) of them eliminated free grazing in their coconut gardens.

However, the adoption process was very slow due to problems associated with economic conditions

of farmers particularly lack of finance. Self help societies also found difficulties in meeting the entire credit requirements of their members meant for the adoption of technologies in the coconut farms due to paucity of funds. Moreover, cases from field contexts spotlighted lack of information and knowledge in respect of conceptual understanding in the transfer and use of technologies. What they needed was constant exposure to the concept and field practices of up-dated technologies on coconut and constant special motivation prop.

Adoption of Post-harvest Technologies

Our field observation showed that majority of coconut growers were mere producers of coconut, i.e. primary producers and did not involve/carry out the activities pertaining to the secondary and tertiary sectors on coconut due to lack of infrastructure and services, including knowledge support and marketing networks, lack of entrepreneurial skill and talent, debt bondage with private trader/merchant, absence of collective bargaining and such other reasons. Since these and other related problems could be tackled by joint and collective action through institutional networking which the coconut farmers never attempted so far, an attempt was made enabling adoption of post-harvest technologies on coconut through coconut farmers self help societies.

*** Most of the villages in the southern parts of Tamil Nadu are nuclear settlements. Farmers seldom establish farm-stead; they least care to fence their farm; and also do not suspect the safety and security of the properties on their farms; they seem to trust their neighbours and their fellow villagers; severe damages to the crop / properties are more likely to be caused only in the context of litigation, faction, personal vengeance, greed and the like. Similarly they do not quarrel with those who happen to trespass their farms for whatever reason, except with strangers; they maintain a high level of neighbourhood in their locality.



As the project envisaged promotion of post-harvest technologies on coconut among coconut growers through joint and collective efforts, the 'core group' of every self help society was sensitized on the quality consideration of their fellow members. One among the criteria is identification of coconut growers who could contribute for the business of the self help society and enhance income through better business i.e. coconut growers who were free to dispose their coconuts at every harvest as per their own wish and free from debt bondage/ lease agreement with trader/ merchant.

The PRA-Preferential Ranking Exercise held among members of the self help societies showed that majority of members of the self help societies have strong inclination to avoid selling of coconuts to traders/ merchants in their locality (due to marketing imperfections and

obnoxious practices) and therefore resolved to develop 'assembling

hitherto never done due to sale of coconuts at the farm itself to trader/



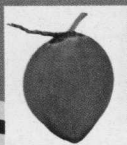
Processing by women Self Help Groups

yards' facilitating value addition on coconut and collective bargaining. Establishment of coconut assembling yard was justified that it would help take up preliminary processing of coconuts viz., atleast 'de-husking'

merchant, paving the way for sale of two different products viz., the de-husked coconut and the coconut husk; would also eliminate trade allowances i.e. giving away 5-10 coconuts for sale of every 100 nuts to buyer in the locality; would also help optimization of marketing cost particularly cost of transport of coconut to distant markets viz., Kangeyam and Vellakovil (wherein more than 50 % of coconut oil mills in TamilNadu exist) where the coconut farmers can make direct sale besides availing the price advantages effecting quality based pricing than of unit based pricing for their coconuts. Despite the above and other reasons, in fact the members of self help societies came forward to establish the assembling yard as their common property after witnessing the real experience of a few progressive coconut farmers who ventured themselves for effecting direct sale of dehusked coconut to



Coconut Assembling Yard



coconut oil mills in Kangeyam. A few cases of farmers who took up copra production also helped to gear up the process.

Assembling Yards

Although all the self help societies had high perception of the significance of coconut assembling yards, only four of them have created the coconut assembling yards in their locality. The members have constant watch over the market situation prevailing at Kangeyam particularly the regulated markets. On an average 5-6 lakhs coconuts were assembled in each assembling yard per annum, creating a positive dent on the coconut price in the locality. Beyond that establishment of market yards propelled the coconut farmers to pay more attention on quality consideration on coconut, in turn necessitating the adoption of appropriate cultural technologies in the coconut farms. As for copra production, the self help societies have made a humble attempt only recently. As they regarded it “an innovative,” only a few progressive members of the self help societies have ventured in copra production and have been effecting direct sale of copra to coconut oil mills at Kangeyam. Women self help groups were imparted training on copra production and they have been engaged on contractual basis.

Yet the copra production is constrained due to dearth of infrastructure and services at the disposal of the farmers self-help societies. Hence, the self help societies have evolved a few realistic strategies through their Federation.

Project Outcome

Comments made by the members of Self Help Societies

“We will not leave our coconut palms to hung-up into dry even when the monsoon cheats us continuously for three or more years.”

Mr.Subbaiah, Member, Coconut Farmers Self Help Society, M.Pudupatty.

“We increased the nut production in coconut farm without incurring additional expenditure; the palms affected by pencil point disease start yielding.”

Mr.Kulandai, Member, Coconut Farmers Self Help Society, Dharmathupatty.

“Through copra production, net income per palm is increased by one rupee per nut besides creating employment among women in the village.”

Mr.Rajendran, Secretary, Coconut Farmers Self Help Society, Dharmathupatty.

“We discarded application of chemical fertilizers and could able to reap the benefits of organic manuring after two years; Today the palms are very rich and their yield in terms of quality nuts is remarkable.”

Mr.P.Nagaraj, Treasurer, Coconut Farmers Self Help Society, M.Pudupatty.

“Simply by primary processing of coconut through de-husking and collective marketing, we get an additional price of 50 paise per nut in the village.”

Mr.N.Rajagopal, President, Coconut Farmers Self Help Society,

“We get an additional income of Rs.9000 per acre through cocoa cultivation in the coconut farm.”

Mr.Jothivel, Member, Coconut Farmers Self Help Society, Dharmathupatty

“We know the art of cost reduction and productivity increasing technologies on coconut. Our fellow-farmers are our nichers so far as adoption of technologies on coconut in our village is considered.”

Mr.N.Annamalai, President, Coconut Farmers Self Help Society, Vannampatty

“We acquired the capacity through group collectives and cooperative effort to take up entrepreneurial activity on coconut in the village.”

Mr.Govindraj, Treasurer, Coconut Farmers Self Help Society, Authoor.

“We wish to create common infrastructure and services for the production, processing and better marketing of coconuts/coconut products in villages. Our Federation will promote entrepreneurial and trade developments on coconut in the region.”

Mr.N.Elangovan, President, Federation for Coconut Development, Velagoundanpatty.

Conclusion

To a coconut farmer, adoption of modern technologies on coconut that are very new and innovative does not mean a mere picking of one or more of the technologies. What it meant to him is delivery of standard of living, more specifically augmenting the economic stability. Towards identifying the choice of technologies, therefore a methodological prime – mover was used in this research namely the Participatory Planning and Action.



Through the study, the focus was kept on knowledge transfer of technologies on coconut and the extent of adoption.

During project implementation we witnessed that adoption of coconut technologies that are perceived as new and innovative, at the foremost demanded bringing attitudinal change among coconut farmers and eliciting high perception towards the targeted (projected) technologies. We found several of the demographic, social, economic, psychological, cultural and such other variables/ factors of farmers and the macro factors like government policies/programmes, marketing environment, science and technological innovations and their advancement etc, exerted greater influence on the adoption behaviour, particularly attitude of coconut farmers. During the early days of the project, the innovative attempts by the 'innovative category' among the farmers in villages were looked down upon as a result of absence of strong nibblers/supporters, absence of dependable model for replication, weak/ inadequate conceptual base and knowledge about scientific technology on coconut. Moreover the innovative category could not

demonstrate substantive economic gains despite adopting cultural technologies in their farms. The diffusion of technologies became much faster only when such innovators were observed those who showed up economic stability, a higher – knowledge – information status in respect of cultural and post harvest technologies on coconut. In fact the project could able to develop only a group of such innovators in villages in all these years since 2004, besides creating a strong base for participatory action through self governance and net working.

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The Author is the Principal Coordinator of the project under TMOC of the Coconut Development Board, GOI, Kochi on Demonstration and Adoption of Technologies on Coconuts through Participatory Planning and Action in Dindigul District, Tamil Nadu (2003).

Philippine coconut oil exports down 15% in August 2007

Philippine exports of coconut oil fell by 15 per cent in August to 65,955 metric tons due to tight copra supply according to the preliminary export figures from the United Coconut Association of the Philippines, or UCAP. The exports were 21 per cent lower, mostly due to devastation wrought by a series of strong typhoons on coconut plantations late last year, a trader said. Supply traditionally rises in the second half of the year due to seasonal factors. "A good export volume at this time would be above 80,000-ton level," the trader said. A slowdown in operations by a major oil mill and stronger demand in the local market for biofuel and oleochemical applications also contributed to the decline, he added. Exports in September should recover on increased copra supply, the trader said. The Philippines is the world's largest exporter of coconut oil and coconut-based products.

Source : The Co-community