

# Farmer participatory approach under decentralised planning to implement interventions on coconut based inter cropping

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## Introduction

Coconut plays a pivotal role in the agrarian economy of Kerala state. It is predominantly cultivated in small and marginal holdings and occupies about 40 per cent of the total cultivated area in Kerala. Most of these holdings neither provide gainful employment opportunities for the family labour throughout the year nor generate sufficient income to meet the family requirement. Presently coconut growers in Kerala are more exposed to economic risks and uncertainties owing to the rapid price fluctuations. In this context it is needless to emphasize the importance of crop diversification in coconut gardens. The agronomic feasibility and economic viability of adoption of coconut based farming systems have been amply demonstrated in research stations and farmers' fields. In spite of the obvious benefits of coconut based farming system over the traditional monoculture, the extent of adoption of the recommended cropping system is not at a satisfactory level. However, some Grama Panchayats in Kerala have successfully implemented certain interventions related to coconut based farming

system under the peoples' campaign for decentralized planning programme.

## Group management approach for enhancing income from coconut farming

One of the major causes for low production and productivity of coconut in Kerala is the fragmentation of holdings with little or no resource with the owner farmers for the efficient utilization of these holdings. The fragmented holdings do not render themselves viable for the optimum utilization of resources and the adoption of improved technologies by the cultivators. To augment the production and productivity of such small and marginal holdings, it was suggested to have group management of resources which helps to overcome the inherent weaknesses of the fragmented holdings. The State Department of Agriculture initiated programmes for organising coconut growers to form groups at grass root level through the formation of Kera Vikasana Samithies (coconut development committees) since 1989. But, in most of the cases these Samithies have been functioning



only as an intermediate agency for distributing the incentives provided by government to coconut growers. Hence efforts are required to revitalize the group approach in coconut farming to enhance income through better adoption of technologies including various cropping/farming systems. The effective functioning of these farmer groups depends on the interplay of a number of socio-psychological, economic, political and situational factors.

### **Decentralised planning and participatory approach**

In Kerala State, agriculture sector has been given due importance under the decentralized planning programme implemented since the ninth plan period. Under the People's Plan Programme, 40 per cent of the grant-in-aid allotted to the local bodies were set apart for implementing projects in production sector. Accordingly, various interventions in farming sector were taken up by local bodies with the active participation of farmers to solve location specific problems. Taking into account the scope for implementing interventions to enhance income from coconut cultivation through the adoption of various coconut based farming systems (CBFS), some Grama Panchayats have implemented schemes under the decentralised planning programme to encourage intensifying CBFS activities.

### **Experiences of Peralassery Grama Panchayat**

#### ***The locale***

Peralassery Grama Panchayat is located about 15 km away from

Kannur town, in the South East of Edakkad assembly constituency in Kannur District. Agricultural holdings in the Grama Panchayat are predominantly fragmented small and marginal holdings. About 98 per cent of the holdings are less than one ha. in size. Coconut is the most important crop cultivated in the Panchayat. Coconut occupies 1245 ha out of the total cropped area of 1830 ha.

#### ***Genesis of the scheme***

Farmers participating in the discussions held in the Grama Sabha (ward level set up for discussing and finalizing proposals for decentralised planning programme) pointed out the need to implement schemes for enhancing income from coconut based homesteads. Though there was not much scope for expanding the area under cultivation to increase income, the opportunities for crop intensification in the coconut holdings were to be tapped. Hence it was suggested to formulate schemes for popularizing intercropping in coconut gardens. Accordingly a scheme on intercropping in coconut garden was formulated and implemented in the year 1997-'98.

#### ***The Scheme***

The scheme was envisaged to encourage intercropping in coconut gardens. Under the scheme, quality planting materials of banana were made available for intercropping in the coconut based homesteads. The organizational set up for implementing the scheme included

- i) Panchayat Level Development Committee with President of the Grama Panchayat as the Chairman
- ii) Ward Level Committees with the respective ward member as

Chairman and iii) Neighbourhood Groups at the grass root level.

About 95 per cent of the farm families of the Grama Panchayat were involved in the project. On an average, 10 banana suckers @ Rs.4 per sucker were distributed per farm family under the project free of cost. Beneficiary contribution of Rs. 20 per plant for the expenditure on planting and maintenance was also envisaged under the project. Awareness programmes were organized for the conveners of neighbourhood groups about the project details and planting and maintenance of banana. Extension literature on crop management aspects of banana were printed and distributed among the farmers with the help of the Regional Agro Industries Corporation (RAIDCO), Kannur. The banana suckers were procured from Pazhakulam Service Society, Adoor. Later on it was assessed that about 4 per cent of the plants were damaged due to the bunchy top disease and about 5 per cent due to poor management. It was assessed that additional production of banana to the tune of about 364 tonnes could be achieved through the projects. Besides, the use of banana inflorescence and pseudostem as vegetables were popularized. The biomass available after the harvest of bunches were recycled to coconut palms as compost. It was assessed that 750 tonnes of organic matter was thus recycled in coconut gardens. It was envisaged to sustain the benefits of intercropping during the subsequent years. The suckers produced could be utilized for extending banana intercropping in the entire interspace area available in each homestead.

## Farmers' perception about the benefits, constraints and suggestions related to the implementation of the scheme

The perception of selected farmers on the benefits, constraints and suggestions related to the implementation of the scheme on intercropping in coconut gardens is summarised in *Table 1*.



*A successful farmer in his coconut garden intercropped with banana.*

The analysis of the perception of farmers, clearly indicated that the implementation of the scheme was successful in creating awareness about the importance of taking up intercropping in coconut gardens for enhancing the income. Similarly, it was agreed by all that there was improvement in the production of banana and organic recycling in coconut gardens. Further, the scheme also helped in popularizing the use of banana inflorescence and pseudostem as vegetables.

There were many constraints in effectively implementing the scheme to achieve the objectives. There is inherent limitation due to the high palm density (in most of the gardens in the locality the number of coconut palms per ha is above 250) in the fragmented holdings rendering the coconut gardens unsuitable for crop intensification. Hence, farmers suggested to formulate programmes for restructuring the homesteads for optimum palm density so as to get

**Table 1.** Perception of farmers on the benefits, constraints and suggestions related to the implementation of the scheme on "Intercropping in coconut gardens" (n=30)

Item	Frequency	Per cent
<b>Benefits accrued</b>		
Created awareness about the importance of intercropping in coconut for higher income	30	100.00
Enhanced the production of banana	30	100.00
Popularised the use of banana inflorescence and pseudostem as vegetables	30	100.00
Enhanced availability of organic matter for recycling in coconut garden as compost	30	100.00
<b>Constraints to effective implementation</b>		
High palm density in coconut garden does not provide space for crop intensification	26	87.00
Holding size is too small to take up crop intensification activities	26	87.00
Since banana suckers were distributed free of charge, many farm families did not take adequate attention to plant and nurture banana	20	67.00
Due to various socio-economic reasons people are moving away from farming as the major source of livelihood	19	63.00
Efforts for group management of resources and activities in coconut farming for higher productivity and income are lacking	18	60.00
The scheme depends on private agencies to meet the large scale requirement of planting materials	18	60.00
Lack of effective extension programmes on scientific crop management	25	83.00
Planting materials of preferred banana varieties were not provided under the scheme	15	50.00
Incidence of 'bunchy top' disease in banana	12	40.00
Lack of follow-up programmes for ensuring effective implementation of the scheme	20	67.00
Monitoring activity through the formal committee was inadequate	18	60.00
<b>Suggestions for improvement</b>		
Formulate and implement follow-up programmes	27	90.00
No item should be given free of cost, nominal amount should be charged for the benefits provided under the scheme	20	67.00
Other crops such as colocasia, elephant foot yam, tapioca, pepper etc also should be included in the scheme for inter/mixed cropping	20	67.00
Schemes to encourage decentralised nurseries for the production of quality planting materials of inter/mixed crops are to be implemented.	15	50.00
Since majority of the operational holdings are very tiny, incentives for required inputs should also be provided other than planting materials	25	83.00
Emphasis should be given on formulating schemes for restructuring the homesteads for optimum palm density for higher productivity from CBFS	15	50.00
Effective extension programmes are to be organised on scientific crop management technologies under CBFS through Krishi Bhavan	25	83.00

higher productivity from CBFS.

Another important constraint as perceived by the farmers was that, many farm families did not take adequate attention to plant and nurture banana since banana suckers were distributed free of charge. Free distribution of materials quite often

forms a component of agricultural development schemes, which, in a way reduces the quality of participation of farmers in the formulation and implementation of schemes. This constraint was officially documented in the draft proposals circulated for Grama



*Another successful farmer in his coconut garden intercropped with banana.*

Sabha by the Peralassery Grama Panchayat in 1999. However, majority of the farmers are also of the view that since majority of the operational holdings are very tiny, apart from distributing planting materials, incentives should be provided for procuring other inputs as well. Farmers suggested that other crops such as colocasia, elephant foot yam, tapioca, pepper etc also should be included in the scheme for inter/mixed cropping. It is imperative that tuber crops are given adequate importance while promoting intercropping practices among cultivators since these crops can provide for the food security among rural poor households.

Farmers also opined that the initial interest developed by the scheme could not be sustained due to lack of effective follow-up programmes. In most of the cases farmers did not take up activities to expand the intercropping in their coconut homesteads. The general trend that people are moving away from farming as the major source of livelihood due to various socio-economic reasons also poses serious limitation for the successful implementation of schemes. Farmers also opined that lack of effective extension programmes on scientific crop management affected the quality of scheme implementation. Many

studies have shown that Krishibhavan staff working at the grass root level are overburdened with more of routine office work, which in turn affected the frequency and quality of field extension services. Restructuring of the agricultural extension service, hence, assumes much significance for ensuring an effective transfer of technology set up for the promotion of sustainable agricultural practices like inter/mixed cropping among the cultivators.

Lack of availability of quality planting materials of inter/mixed crops is a serious constraint in popularizing multiple cropping in coconut gardens. In the scheme implemented in Peralassery Grama Panchayat, private sector was depended upon to meet the large scale requirement of planting materials. Hence, the need for having schemes to encourage decentralised nurseries for the production of quality planting materials of inter/mixed crops were emphasized by the farmers.

Proper monitoring and evaluation is a pre-requisite for the successful implementation of an agricultural development scheme. The farmers perceived that the monitoring of implementing the scheme on intercropping in coconut garden was quite inadequate. Mr. K.P. Jayarajan, Assistant Director of Agriculture, Edakkad Block and the winner of 'Karshakamithra' award instituted by the Kerala State Department of Agriculture for the best Agricultural Extension Worker, when contacted by the authors in connection with the present study also opined that even under the decentralised planning programme, scheme implementation has been mostly expenditure oriented and not result oriented. Hence it is essential that participatory approaches are employed for

effective monitoring and evaluation of the schemes to enable farmers to utilize the benefits envisaged. Mr. V. K. Raghavan, former president of Peralassery Grama Panchayat, in whose tenure the scheme was implemented, also agreed with the perception of farmers about the constraints in implementing the intervention on intercropping in coconut. However, he opined that the scheme was highly successful in creating awareness among the farmers about the importance of intercropping in coconut for higher income. Appropriate schemes are to be formulated as a follow up measure for encouraging inter/mixed cropping in coconut garden, he suggested.

### Conclusion

The case study on experiences of implementing the scheme on intercropping in coconut garden under decentralised planning programme in Peralassery Grama Panchayat indicated that the implementation of the scheme was successful in creating awareness about the importance of taking up intercropping in coconut gardens for enhancing the income. There is inherent limitation due to the high palm density in the fragmented holdings rendering the coconut gardens unsuitable for crop intensification. Hence, farmers suggested for formulating programmes for restructuring the homesteads for optimum palm density for higher productivity from CBFS. Farmer participatory approach for planning and implementation of location specific schemes to popularize inter/mixed cropping in coconut gardens has to be strengthened under the decentralized planning programme to enhance income from coconut farming especially among small and marginal farmers.