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"REPLANTING AND REJUVENATION OF COCONUT GARDENS IN OACHIRA AND KOTTARAKKARA BLOCK PANCHAYAT IN KOLLAM DISTRICT"- AN ANALYSIS

The Report

Evaluation Division

Kerala State Planning Board

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Disclaimer

This Study has been prepared by Swapna. P, Research Assistant, District Planning Office, Kollam. The facts and figures in this report is based on primary data collected by the author from the study area based on a questionnaire and secondary data collected from various sources and do not reflect the views or policies of Kerala State Planning Board.

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Sd/-
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CDB	-	Coconut Development Board
CPCRI	-	Central Plantation Crop Research Institute
DO	-	Designated Officer
ICAR	-	Indian Council of Agricultural Research
KVK	-	KrishiVignan Kendra
SAUs	-	State Agricultural universities
TCA	-	Tribal Council Area
UT	-	Union Territory

Coconut Development – "Replanting and Rejuvenation of Coconut Gardens" in Oachira And Kottarakkara Block Panchayats in Kollam District – An Analysis

Abstract

Kerala the land of Kera (coconut tree) has been steadily slipping in area under cultivation of coconut. Kerala's share in area under coconut cultivation in the country has fallen sharply from 57% in the early 1990's to 40.2% in 2011-12. Not only had the area under cultivation, production and productivity also showed a declining trend from 2005-06 to 2010-11 except during 2008-09. The decline in productivity is a major concern for the state.

One of the factors that is responsible for the decline in production and productivity is the large scale infestation of coconut by root wilt disease. One of the strategies recommended to reduce the spread of disease is cutting of disease affected palms and rejuvenating the existing palms. For this Replanting and Rejuvenation programme was chalked out by the Coconut Development Board and implemented in the severely disease affected districts of Kollam, Thiruvananthapuram and Thrissuras a pilot project.

The present study is an attempt to analyze the process of implementation of the scheme and its impact on the coconut industry of the root wiltaffected areas of Oachira and Kottarakkara block panchayats in Kollam District and to study the improvement in group activities. Based on this, the following specific objectives have been framed for the study.

- To examine the achievement of the scheme in the total removal of disease affected palms in the study area.
- To examine whether the project succeeded in achieving the target of replanting coconut gardens in the study area.
- To examine that replanting is done with quality seedlings.
- To examine the role of clusters in the implementation of the programme.
- To identify the support mechanisms of the scheme.
- To compare the process of implementation, problems and gaps and impact of the programme on the beneficiaries of the coastal belt and in the midland regions

Findings

- Analysis of the secondary data in the study shows that under the heading cutting and release of cutting subsidy both the block panchayats could not achieve the target and also the achievement in the coastal belt is higher than in midland regions.
- More than 85% of the people in Oachira block and 60% of the people in Kottarakkara block are aware about the programme, its components and the process of implementation.
- More disease affected palms in coastal regions (73%) are removed under the programme than in the midland regions (66.6%).
- The intensity of disease is higher in coastal areas than in the midland region.
- The scheme aimed for the total removal of disease affected palms, but the result of the analysis shows that about 27% of the disease affected palms in coastal areas and 34% of the disease affected palms in midland regions are yet to be removed.
- The scheme aimed for 50% re-plantation but it could not achieve the same. Data regarding distribution of seedlings and re-plantation shows that only about 43.33% of the respondents received seedlings for replanting.
- Cutting subsidy is not distributed in equal proportion
- Clusters played an important role in identifying the disease affected palms, distributing seedlings and fertilizers etc.
- Soil testing is not carried out properly before replanting. Only about 10% and 16.67% of the respondents respectively in Oachira and Kottarakkara block tested the soil before replanting.
- After removal of disease affected unproductive and old palms about 54% of the respondents in Oachira block and 44% of the respondents in Kottarakkara block cultivated coconut in the place of palms removed. It shows that about 50% of the farmers give up coconut cultivation.
- Rejuvenation programme is not properly carried out.
- In the midland regions i.e. in Kottarakkara block panchayat about 44% of the respondents did not receive cutting subsidy till date i.e. it is pending.
- Time frame of implementation of the scheme is not maintained.
- Clusters are adequately represented by women in each block panchayats
- Women representation in clusters played an important role in the functioning of clusters and for the implementation of the programme

- Adequate training for scientific management of coconut cultivation is not provided as part of the implementation of the programme in the study area.
- Achievement of the programme is higher and gaps are lower in the coastal belt than in the midland region.
- Clusters, Krishi bhavans and credit institutions supported the programme.

Suggestions

The ways suggested for improving the implementation process and reducing the gaps in the implementation of the programme are as follows.

- Monitoring system should be made more effective
- Before implementing a pilot project adequate training should be imparted to the farmers about the scheme, its components, benefits and the time frame.
- Training should be imparted to all farmers in the scientific management of coconut palms in order to make it profitable.
- Make the farmers aware of the importance of testing soil before replanting.
- Inspection should be carried out to check whether provided seedlings are replanted or not.
- Organic farming shall be encouraged.
- Implementing Officer should ensure that benefits are reached to the people on time.
- Promote mixed cropping and intercropping in coconut gardens.

The project aimed for cutting and removal of all disease affected, unproductive, old and senile palms and rejuvenation of existing coconut gardens in the district. Even though the programme made about 75% achievement in cutting and removal and distribution of cutting subsidy. But it could not achieve much in re-plantation and rejuvenation of the existing gardens. There are deficiencies in the distribution of cutting subsidy and distribution of fertilizers. But clusters and women played an important role in implementing the programme.

Chapter 1
"Replanting and Rejuvenation of Coconut Gardens in Oachira and Kottarakkara Block Panchayat in Kollam District - An Analysis"

1.1 Introduction

Coconut (Cocosnucifera) known as "Kalpavriksh" in Sanskrit is a valuable traditional crop of our country and is the tree which provides all the necessities of life since time immemorial. Every part of the coconut is used by man, of late value added products from coconut has acquired prominence. Coconut in India contributes to the livelihood of millions of small and marginal farmers especially in the coastal regions. Coconut industry has vast potential for employment and income generation among the farmer community of Kerala.

Though India is the third largest producer of coconut in the world, it has the potential to become the world leader. In India coconut is grown in an area of 2.03 million ha producing 14006 million nuts with a per hectare productivity of 6869 nuts in 2011-12.With a coverage of 8.2 lakh hectars, coconut occupies 40.2% of the net cropped area in the state producing 5941 million nuts with a per hector productivity of 7237 nuts during 2011-12. Kerala's share in area as well as production of coconut in the country is declining overtime.

In Kerala the area under coconut cultivation has declined continuously from 2005-2006 to 2010-2011and production of coconut in million nuts also shows a declining trend from 2005-2006 to 2010-2011 except during 2008-2009. The area under coconut cultivation was 897833 ha during 2005-06, it declined to 770473 ha during 2010-11. Production of coconut was 6326 million nuts during 2005-2006, it declined to 5941 million nuts during 2010-11. Productivity of coconut in the state during 2005-2006 was 7046 nuts per ha, it declined to 6862 nuts per ha during 2010-11.

The decline in productivity is a major cause of concern in the state as well as in the country. One of the factors responsible for the decline in production and productivity is the large scale infestation of coconut by root wilt disease in different part of the state as well as in the country.

1.2 Statement of the Problem

Coconut is essentially a small holders crop, fragmented holdings, scattered production , the homestead nature of cultivation, the high incidence of pest and disease and large stock of senile palms have made coconut cultivation un remunerative in the state.

An analysis has shown that the prevalence of old and senile palms , poor genetic base of the planting material under cultivation,poor management attention given to the crop and severe incidence of pest and diseases are the reasons for the low productivity. Among these large scale infestation of coconut by root wilt disease in different part of the state is the major reason for low productivity. The Central Plantation Crop Research Institute, Kayamkulam has established that the root (wilt) disease is caused by Phytoplasma and there are no suitable curative measures to combat this disease. The strategy recommended is cutting of disease advanced, old and senile palms and adoption of integrated management practices for nurturing the mildly affected palms back to health. With a view to improving productivity in these traditional areas which have a huge stock of old and diseased palms , it has been decided to implement the Pilot Project for " **Replanting and Rejuvenation of Coconut Gardens"** in the severely affected districts of Thiruvananthapuram, Kollam and Thrissur in Kerala and Union Territory of Andaman and Nicobar Islands on a pilot basis.

The scheme is a centrally sponsored scheme aimed for total removal of all disease advanced unproductive old and senile palms in the targeted areas of the state in a mission mode. The programme is being implemented in a farmer participatory mode in contiguous areas within panchayat in the district for visible impact. The project is being implemented by the Coconut Development Board in association with the concerned department of agriculture through the local bodies. The programme started in the state during 2009-10and will be completed by 2012-13. It is being introduced in each district in three phases.

The major components of the scheme are:

a) Cutting and removal of all old , senile, unproductive and disease advanced palms followed by re plantation.
b) Rejuvenation of existing gardens through integrated management practices.
c) Assistance for replanting.
d) Implementation, monitoring, Evaluation, Training etc.

The present study is an attempt to analyze the process of implementation of the scheme and its impact in the coconut industry of the root wilt affected areas of Oachira and Kottarakkara block panchayats in

Kollam district, which were selected for implementing the project respectively during the first and second phase of the programme.

1.3 Scope of the study

Being the third largest producer of coconut in the world, India has the potential to become the world leader. Even though, a major producer of coconut, India consumes more than 50% of its coconut production as coconut has the advantage of having hundreds of uses which no other oilseed or horticultural crop can claim. As coconut is used as a food as well as an oil seed crop, coconut products and by-products can be commercially utilized for multiple purposes. If we exploit its commercial viability, additional income and employment can be generated through coconut based integrated farming system which will improve the livelihood security of small and marginal farmers and agricultural workers in the coconut sector as it is a small holder's crop in Kerala.

The decline in area under cultivation, production and productivity set a blow to this dream. One of the major reasons that is responsible for the decline in the production and productivity of the coconut industry is the large scale infestation of coconut by root wilt disease in different part of the country. In order to control the disease and enhance productivity, a pilot programme Replanting and Rejuvenation of Coconut Gardens is envisaged. The Programme started from 2009-10 onwards and continued up to 2013 and Government had spent an amount of ₹ 2053.1625lakhs in Kollam district so far for the implementation of the programme. So it is high time for the state to devote more intensive research and development for rejuvenating the coconut industry from its disease. Hence the proposed study.

1.4 Objectives

The broad objectives of the study are:

1. To examine the process of implementation of the programme and its time frame.
2. To study the improvement in group /cluster activities.

The specific objectives of the study are:

1. To examine the achievement of the scheme in the total removal of all disease affected palms in Oachira and Kottarakkara block panchayats.
2. To examine that whether the project succeeded in achieving the target of replanting and rejuvenating coconut gardens in the study area.

3. To examine that replanting is done with quality seedlings and also people will get benefits on time without complaints.
4. To examine the role of clusters in the successful implementation of the programme and the proportion of women in the clusters.
5. To understand that any training on scientific management of coconut cultivation is provided as part of the programme.
6. To compare the process of implementation, problems/ gaps and impact of the programme on the beneficiaries of the coastal belt as well as in the midland region of the district and also in the first and second phase of the programme and to suggest remedial measures.
7. To identify what are the support mechanisms of the scheme.
8. To study the improvement in the management of holdings**.**

1.5 Research Methodology

Research Design

Research design adopted is exploratory study.

Data Source

Primary and secondary data is used for the study. Primary data is collected from the beneficiaries of the project in Oachira and Kottarakkara block panchayats in Kollam district based on a questionnaire. Secondary data is collected from Economic Reviews, Agricultural statistics, research works, articles etc.

Sample size

With regard to the objectives stated, a sample size of 30 members from each block panchayats was chosen from the beneficiaries of the project to explore the opinion of the people towards the project and its implementation.

Methods of data collection

Field visit was conducted to collect data based on a questionnaire from the study area

Analysis and interpretation

Collected data was recorded, tabulated and edited accurately and percentage analysis was done in all cases to bring out clear indicators.

1.6 Limitations of the study

As the study is mainly based on primary data, all the inherent limitations of primary data will constitute its limitations. Despite this, time act as a major limitation for conducting the study.

1.7 Organization of the Study

The study is organized into six chapters. First chapter gives the introduction. Second chapter deals with the review of related literature and the third one gives an overview of the Coconut Economy of the state and the District. The fourth chapter explains about the Scheme- Replanting and Rejuvenation of Coconut Gardens in the traditional States of India. The fifth chapter presents the analysis and interpretation of the data and the sixth chapter gives findings and suggestions of the study.

Chapter2
Review of Literature

A review of the existing literature helps the researcher to understand the nature and quantum of research studies already undertaken in a particular area. In India and the state, considerable research on the agriculture scenario has been done during the last years. There are several studies conducted by many researches covering one or other aspect of coconut cultivation. Some of the studies is as follows.

1. *"Coconut growing"* (1964) C.J.Piggot.

C.J Piggot in his book titled "Coconut growing" 1964discusses the economics of running a plantation and then goes on to describe the environmental conditions and farming practices associated with scientifically based coconut agronomy. This book deals with establishing new plantations and improving old ones, and with the processing and marketing of copra and other coconut products. It also pointed out the diseases and pests of palms and give advice on their control.

2. *"A scham of coconut prices in Kerala"* (1973) an article published by M.VGeorge and P.T.Joseph.

In this article the author analyses the nature of fluctuations in the prices of coconut and suggested a scheme for stabilization of coconut prices in Kerala. The study was undertaken to examine the long term trends as well as the annual fluctuations in prices with a view to stabilize the price and income of the growers. The study held that, inspite of the large increase in the area under coconut (about 44%, during 1970-71, the increase in production has been very less (24%). It is also stated that the fall in the production was due to heavy incidence of diseases.

3. "Coconut" (1974)-Reginald child.

In this book, the author covers all aspects of coconut cultivation, its cultural requirements, the care and maintenance of coconut plantations. Control methods of pests and diseases are discussed especially in the light of an improved understanding of some obscure diseases. This book also presents a concise but reliable review of information on the coconut palm and its products.

4. "*Coconut the vertile crop of Kerala*" 1975 Viswamnathan Pillai.

The study indicates that every part of the tree has important economic uses. The study also states that the state accounted for more than 70 percent of the all India area under coconut and was responsible for 2/3rd of the total output of the crop in the year 1975. The trend in production over the previous decades was not quite encouraging. Two factors have been responsible for this according to this study. The first and more apparent one is damage being done to the crops by the root and bud diseases which affected a considerable part of the coconut tracts of the state. Second is theunfavourable monsoon condition.

5. *"Stunted coconut economy*" (1978) Githa Aravamuthan EPW.

In this article the author analyses the position of coconut crop in Kerala and states the various reasons for poor productivity. The low yield per tree and low quality of the nut is due to overcrowding of trees, lack of irrigation and manoeuvring. And also held the opinion that Kerala is relatively well versed in commercial utilization of the coconut and there is a need for revamping production and redistribution of coconut.

6. "*Hand book on coconut palm*" (1982) P.K. Thampan.

P.K. Thampan in his book point out that coconut palm and its products constitute a major source of livelihood to a sizeable section of the rural population in the tropics and also contribute substantially to the total export earnings of some of the Asian Pacific countries. The book also deals with the topics on food products and commercial products which throw much light on product diversification and by product utilization. The author also pointed out the areas like control of pests and diseases and multi cropping in coconut holdings for generating higher income and employment in rural areas.

7. "*Declining coconut economics of Kerala an analysis*" (1988) – TC Mohan.

T.C. Mohan in his book point out that Kerala is well known for its coconut production and its productivity from 1956-57 to 1985-86, and it has been accounting for 60-65% of all India production. The main issue discussed was that why despite favourable agro climate condition there is a declining trend in area production and yield of coconuts in Kerala. The

available findings from various studies neither have provided sufficient explanations nor tackled the problems of coconut economy. To bridge the gap and to increase production and productivity, the state Government was asked to take up comprehensive policy measures like subsidy incentives providing quality seedlings and extension activities.

8. " *Coconut Development in Kerala-An expost evaluation*" (1991)- D Narayana and others.

This book explains a systematic study of the economics of coconut cultivation. The study also analyses the trends in area, production and productivity of coconut in Kerala and compares the same with the trends in other states. They found that the share of Kerala in area under coconut in India had shown a decline and more alarmingly the share in production has shown a faster decline. An analysis of the maladies of the sector showed that though the impact of dreaded diseases of root wilt may explain such trends. The persistence of such trends in root wilt free regions which were showing faster growth in area, points to the deep rooted structural factors operating in the coconut economy of the state.

9. "*Indian coconut industry: The way forward*" (2007) an article published by Thomas Mathew.

In this article the author discusses the Indian coconut economy during the globalization era. He also gave a brief review of the current coconut situation. According to him, the obstacle to the competitiveness of India's coconut sector is low rate of returns from the coconut holdings and the reduced input-output realization especially in the traditional coconut growing states. He observes that fluctuations in the prices of coconut affect the productivity of the farm and profitability of coconut farmers.

10. "*Leaf blight disease of coconut palm*" (2001)-Sundaram and others.

In this article the author opined that coconut palm is affected by more than 50 diseases of which a few are lethal and many are debilitating diseases reducing the vigour of the palm causing loss in nut yield. Majority of the diseases of the coconut are caused by fungi or phytoplasmas. These diseases often cause the death of coconut palms.

11. "*Coconut economy of Kerala –An analysis*" 2009M. Phil. thesis by SarithaVasan.

The scholar in her M. Phil thesis explains that coconut cultivation is not profitable. The growing diminution in the size of operational holdings, lack of economics of scale in operations, high incidence of senile and unproductive palms and discriminate planting of tree species in coconut gardens etc are the main hindrance in achieving profitably. In this work the scholar also explains that the prospects of coconut cultivation depend on factors such as price stability, product diversification and effective control of diseases. The prevalence of debilitating root (wilt) disease, about 4.1 lakh hectare in Kerala destabilized the growth of the industry in the state and its affects eight southern districts of the states. The root(wilt) disease of Kerala, tatipaka disease of Andra Pradesh, basel stem root in Karnataka and Tamil Nadu are the different type of diseases affecting coconut that cause significant reduction in yield.

For re-engineering and revitalization of the coconut cultivation and thereby ensuring an increasing trend in the production of coconut in Kerala at least to the level of demographic growth rate the Coconut Development Board has chalked out the mega project replanting and rejuvenation of coconut gardens. Financial assistance is provided for cutting and removing disease affected old and senile palms and replanting disease tolerant seedlings.

Chapter 3
Coconut Economy – State and the District Scenario

Coconut is a very versatile and an important commercial palm in the tropics of the world. Coconut palm, botanically known as *Cocosnucifera L* and belonging to the family of plmac is a major crop of many nations and is considered as a tree of life.

In Indian subcontinent and South East Asia, it is a symbol of piety and prestige. Coconut is considered as a divine fruit and enjoys special status in social ceremonies. It is a unique gift of nature to mankind. Coconut is considered as nearly a perfect diet as it contains almost all essential nutrients needed by human body. People call coconut by a variety of names which reflects its usefulness to societies viz., tree of heaven, tree of life, tree of abundance, king of palms etc. Almost every part of coconut palm is utilised in some form or other.

The coconut palm is widely distributed throughout Asia, Africa, Latin America and the Pacific region. It is produced in about eighty seven countries in the world in every continent except Europe and Australia.

Kerala in the local language means 'the land of coconut tree' and it is believed that the state has inherited the name from the coconut tree. In Kerala it is an important component of the food basket, a source of edible fat and a major industrial raw material. Hence it is called 'kalpavrisham' (heavenly tree). With coverage of 8.2 lakh hectares coconut occupies 40.2% of the net cropped area in the state.

Coconut is small holder's crop cultivated largely in scattered patches alone, the bundle of paddy filed, river banks and backwaters stretches and in residential compounds. Again it is cultivated not as a mono culture but mostly in garden with large variety of other perennial, annual and seasonal crops. Coconut is s source of raw material for many industries like coir, manufacturing, oil milling etc.

This chapter examines the trends in area, production and productivity of coconut in the state as well as in Kollam district over the years from 2004-05 to 2011 -12.

Besides the trends in area production and productivity of coconut in the study area from 2008-2009 to 2011-12 is also examined.

3.1 C**oconut cultivation in Kerala**

Coconut based farming system is the main stay of the farmers of the state with a coverage of 8.2 lakh hectares coconut occupies 40.2% of the net cropped area. During 2010-11, the area and productivity of coconut in the

state declined by 11.2 per cent and 6.7 percent respectively. In 2011-12, the situation has improved with 6.6 percent expansion of area and 12.4 percent upsurge in production over the previous year. Details are shown in the following table.

3.1 Area, Production and Productivity of coconut in Kerala

Year	Area (Hectare)	Production (Million Tonnes)	Production nuts/Hectare
2005-06	897833	6326	7046
2006-07	872943	6054	6935
2007-08	818812	5641	6889
2008-09	780500	5763	7384
2009-10	778618	5667	7278
2010-11	770473	5287	6862
2011-12	820867	5941	7237

Source:- DES Agricultural Statistics.

In Kerala the area under coconut cultivation has declined continuously from 2004-05 to 2010-11 and production of coconut in million nuts also shows a declining trend from 2005-06 to 2010-11 except during 2008-09. The same is the trend in productivity. The decline in productivity is a major cause of concern in the state

3.2 Kollam District and the Cultivation of Coconut

3.2.1 About the district

Kollam or Quilon, an old sea port town on the Arabian coast, stands on the Ashtamudi lake. Kollam, the erstwhile Desinganadu, had a sustained commercial reputation from the days of the Phoenicians and the Romans. The history of the district as an administrative unit can be traced back to 1835, when the Travancore state consisted of two revenue divisions with headquarters at Kollam and Kottayam. At the time of the integrating of Travancore and Cochin in 1949, Kollam was one of the three revenue divisions in the state. These three revenue divisions were converted into districts. Shencottah taluk was merged with Madras state consequent on the implementation of the state Reorganisation Act of 1956. When Alappuzha district was formed in 1957, Cherthala, Ambalapuzha, Mavelikkara, Karthikappally. Chenganuur and Thiruvalla Taluks were united to the new

district. When Pathanamthitta district was formed on 1st July 1983, the entire Pathanamthitta Taluk and nine villages of Kunnathur Taluk of the district were also removed. Now the district has a single revenue division with headquarters at Kollam. Pathanapuram, Kunnathur, Kottarakkara, Karunagappally and Kollam are the five taluks in the district.

3.1 Map of Kollam District

The total area of the District is 2491 Sq Km with a population of 26,29,703 persons as per 2011 census. Of which 12,44,815 constitute males and the remaining 13,84,888 are females.

The district is immensely rich in mineral resources. With two rivers the district is endowed with a perennial supply of water and also the district ranks first in livestock wealth of the state. Kollam is an important maritime district of the state with a coastline of 37.3kms.

The district has a prominent place in the field of agriculture. The total extent of land under cultivation is 2,18,267 hectares. The principal crops are paddy, tapioca, coconut, rubber, banana, mango and cashew. About 70% of the workforce is engaged in agriculture. The five major crops: paddy, tapioca,

coconut, rubber, pepper- are cultivated in an area of 1,73,847 hectares. Small and marginal farmers constitute more than 95% of the farming community and the average per family holdings is 0.21 hectare.

3.2.2 Coconut cultivation in the District

Coconut is one of the major crops identified in the district. Generally the coastal belt enjoys its concentration. Production and productivity of coconut is poor in the district mainly because of the large scale infestation of coconut by root wilt disease and senility and closer planting. Data regarding the area, production and productivity of coconut in the district is shown in the following table.

3.2 Area, Production and Productivity of coconut in Kollam District

Year	Area (Hectare)	Production (Million Tonnes)	Production nuts/Hectare
2004-05	66153	444	6718
2005-06	66134	504	7620
2006-07	65392	512	7824
2007-08	58575	378	6753
2008-09	58397	443	7586
2009-10	56675	412	7269
2010-11	56060	378	6743
2011-12	55304	427	7721

Source ;- DES Agricultural Statistics

The area under coconut cultivation declined continuously from 2004-05 to 2010-11ie from 0.66 lakhs hectares to 0.56 lakh hectares while the production of coconuts in million nuts shows a mixed trend from 2004-05 to 2007-8 and thereafter it showed a declining trend in the district as the case with productivity. During 2011-12 both production and productivity shows an uptrend. The productivity of coconut in the district during 2011-12 is 7721 nuts/hectare against the state productivity of 7237 nuts/hectare.

3.3 Coconut Cultivation in Oachira Block Panchayat

3.3.1 About the block

Oachira block panchayat is situated in the north west of Kollam district and adjacent to Alappuzha district and has 6 grama panchayats viz, Oachira, Thazhava, Alappad, Thodiyoor, Clappana and Kulasekharapuram. The block

panchayat is gifted with sea, lakes, plains streams back waters and paddy fields. The soil of the block is classified as sandy loams, laterite soil, and alluvial soil. The North West side of the block panchayat is gifted with mangrove forests.

Total population of the block panchayat is 2,78,325 as per 2011 census. Of this 1,47,459 constitute females and the remaining 1,30,866 males. Out of the total population 18167 belongs to SC/ST communities.

The block panchayat has a prominent place in the field of agriculture. The principal crops are paddy, coconut, banana, mango, pepper and vegetables. The major occupation of the people in the block is agriculture. Majority of the people in western region of the block engaged in fishing. The cropping pattern of the block panchayat is as follows.

3.3 Cropping pattern in Oachira block panchayat

Crops	Area (in hectares)
Paddy	154.68
Coconut	6124.65
Cashew	201
Pepper	84.46
Mango	281.19
Banana	9.15
Pineapple	8.00
Sesame	49.86
Pulses	8.28
Plantain	158.13
Tapioca	972.70

Source:- DES Agricultural statistics

3.3.2 Coconut cultivation in Oachira Block Panchayat

One of the major crop of the block panchayat is coconut. It is grown in an area of about 6124.65 hectares during 2011-12. The production and productivity of coconut is poor in the block due to the high infestation of coconut by pest and root wilt disease .The area under coconut cultivation trends in its production and productivity is shown as follows.

3.4 Area, Production and productivity of coconut in Oachira Block

Year	Area(ha)	Production(lakh nuts)	Productivit (nuts/ ha)
2008-09	3237.15	224.03	6921
2009-10	3164.53	236.28	7467
2010-11	3145.79	225.49	7168
2011-12	6124.05	415.30	6781

Source:- DES, Agricultural statistics various

Data shows that in Oachira block panchayat the area under coconut cultivation during 2008-09 was 3237.15 hectares and producing 224.03 lakh nuts with a per hectare productivity of 6929 nuts . The area under coconut cultivation during the next years shows continuous decline whereas production and productivity shows a mixed trend i.e., it increases during 2009-10 and in 2010-11 it again declined. During 2011-12 the area under cultivation and production of coconut increases whereas productivity shows a declining trend.

3.4 Coconut Cultivation in Kottarakkara Block Panchayat

3.4.1 About the Block

Kottarakkara block Panchayat is situated in the middle of the district and is has 6 grama panchayatsviz, Kottarakkara, Neduvathoor, Ezhukone, Kareepra, Velium and Pooyappally. The block panchayat shares boundaries with Ithikkara block in the south,Chittumala , Mukhatahla and Vettikkavala blocks in the west Vettikkavala and Chadayamangalam blocks in the east and Vettikkavala blocks in the north.

The block panchayat is having a population of 1,66,828. Of this the female population is 86619 and the male population is 80209. Of the total population , 18706 constitute scheduled castes.

The main occupation of the people of the block panchayat is agriculture. Most of the farmers are marginal farmers. Inspite of this there are families engaged in traditional occupations such as cashew and khadi. The principal crops cultivated in the panchayat are paddy, coconut, rubber, banana, and pepper. The cropping pattern of the block panchayat is as follows.

3.5 Cropping Pattern in Kottarakkara block panchayat

Crops	Area (In Hectares)
Paddy	126.93
Coconut	4145.06
Tapioca	1276.52
Pulses	1.47
Ginger	30.42
Cashew	205.81
Pepper	334.08
Banana	85.87
Plantain	423.28
Pineapple	14.00

Source:- DES Agricultural statistics

3.4.2 Coconut cultivation in Kottarakkara Block Panchayat

One of the major crop cultivated in the block panchayat is coconut. It is grown in an area of about 4145.06 hectares during 2011-12. Due to the high infestation of coconut by pest and root wilt disease and the existence of old and senile palms the production and productivity of coconut is declining now a days. The area under coconut cultivation, trends in its production and productivity is shown as follows.

3.6 Area, Production and Productivity of coconut in Kottarakkara block panchayat

Year	Area (ha)	Production (lakh nuts)	Productivity (nuts/ ha)
2008-09	4521.77	286.87	6345
2009-10	4314.89	281.12	6516
2010-11	4396.50	264.73	6022
2011-12	4145.06	261.97	6320

Source:- DES, Agricultural statistics various

In Kottarakkara block panchayat, the area under coconut cultivation during 2008-09 was 4521.77 hectares, producing 286.87 lakhs nuts with a per hectare productivity of 6345 nuts. Thereafter production and productivity shows a continuous decline. Even though the area under cultivation declined during 2009-10 but it shows a slight improvement during 2010-11 and 2011-12 i.e., the area under cultivation was 4145.06 ha during 2011-12. The productivity also shows a slight improvement during 2011-12compared to previous year.

Chapter 4
About the Scheme
Re-planting and Rejuvenation of Coconut Gardens in the Traditional States of India - An ambitious programme of Coconut Development Board.

4.1 Introduction

Kerala and Andaman & Nicobar Islands have a predominantly coconut based economy. The declining productivity has been a major cause of concern in these coconut growing areas. An analysis has shown that the prevalence of old and senile palms, severe incidence of root (wilt) disease and poor management are the major reasons for the low productivity of coconut in Kerala. In A&N Islands, low productivity is mainly due to the existence of a large number of old and senile palms.

The Central Plantation Crops Research Institute, Kayamkulam has established that the root (wilt) disease is caused by Phytoplasma and there are no suitable curative measures to combat this disease. The strategy recommended is cutting of disease advanced, old and senile palms and adoption of integrated management practices for nurturing the mildly affected palms back to health. With a view to improving productivity in these traditional areas which have a huge stock of old and diseased palms, it has been decided to implement the Pilot Project for Replanting and Rejuvenation of Coconut Gardens in the severely affected Districts of Thiruvananthapuram, Kollam and Thrissur in Kerala and Union Territory (UT) of Andaman & Nicobar (A&N) Islands on a pilot basis.

The project with a total outlay of ₹ 2275.64 crore and a central subsidy of ₹ 478.504 crore will be implemented over the remaining three years of the XI plan.

4.2 Objective:

This is a Centrally Sponsored Scheme. A Designated Officer (D.O.) by Department of Agriculture & Cooperation shall administer the scheme in consultation with the Central Government. The scheme is for total removal of all disease advanced, unproductive, old and senile palms in Kerala and unproductive old and senile palm in A&N Islands in a mission mode. Chairman, Coconut Development Board (CDB) is the Designated Officer (D.O.) of DAC for this project.

4.3 Components:

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

The project is being implemented by the Coconut Development Board in association with the concerned Department Of Agriculture through the local bodies.

(i) Cutting and removal of all old, senile, unproductive and disease advanced palms

A subsidy @ ₹ 500 per palm for the first 20 palms, ₹ 250 per palm for subsequently removed palms, subject to a maximum of ₹ 13,000/ha shall be provided to the farmers for cutting and removal of old, senile, unproductive and disease advanced palms. The cutting and removal of disease affected palms in the three districts of Kerala and old and senile palms in A&N Islands shall be undertaken on the basis of the initial baseline survey.

(ii) Rejuvenation of the existing coconut palms by Integrated management practices

The area identified for rejuvenation in three districts of Kerala is 1.33 lakh ha and in case of A&N Islands the area for rejuvenation will be of 0.02 lakh ha, for which integrated management practices involving the following is essential

- Balanced nutrition through fertilizer application
- Irrigation and drainage
- Soil and moisture conservation
- Growing of green manure cover crops
- Application of organic manure including enriched organics
- Intercultural operation including weed control
- Need based plant protection measures preferably with botanicals and bio-agents
- Regulation of shade and maintaining optimum palm population and Promotion of inter / mixed cropping.

For adoption of Integrated management practices a subsidy of ₹ 15000/ha will be provided in two instalments of ₹ 7500/- each. The eligibility for availing assistance under this component is a maximum 4 ha per beneficiary.

(iii) Assistance for replanting

Cutting and removal of advanced disease affected and senile palms will be followed by a systematic replanting programme, which is aimed at 50% re-plantation to maintain optimum and sustainable density. In the case of Kerala, disease tolerant tall seedlings produced from seed nuts procured from healthy mother palms identified in hotspot areas as per recommendation of Central Plantation Crops Research Institute (CPCRI) and disease to lerant dwarfs and hybrids will be adopted. ELISA test for confirming root-wilt infestation shall be conducted with the help of ICAR. A subsidy @ ₹ 20/- per seedling will be provided.

(iv) 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, Coconut Development Board (CDB) will be arranged periodically.

4.4 Salient Features:

i. The project for Replanting and Rejuvenation of Coconut Gardens will be implemented on Pilot basis in the root wilt affected districts of Thiruvananthapuram, Kollam and Thrissur in Kerala and UT of Andaman & Nicobar Islands.
ii. The scheme shall be implemented in mission mode for total removal of all advanced disease affected, unproductive, old and senile palms in targeted areas.
iii. The programme will be implemented in a farmer participatory mode in contiguous areas within panchayats / Tribal Council Area (TCA) in identified Districts, for visible impact.
vi. Organic farming for palms shall be encouraged to the extent practical and possible.

vii. The programme will commence in contiguous area of at least 25-50 ha where farmers have formed themselves into a group as a coconut cluster. Each cluster willhave an elected Cluster Convener and sub group leaders.

viii. A base-line survey will be carried out in a farmer participatory mode covering all holdings in the project area. The palms for cutting and removal will be identified by the farmers themselves and verified by the Cluster Convener and will be inspected by the Agriculture Officer of the State Government/UT Admn./ CDB officials.

xiv. For the rejuvenation programme, the clusters shall be linked to a credit institution for providing inputs for the rejuvenation programme.

xvi. Funds will be released by D.O. to the local Agriculture Officers after cutting andremoval. The subsidy for rejuvenation shall be released to thecredit institutions/manufacturers who have supplied the inputs on credit basis.Eligibility for subsidy, cutting and removal and rejuvenation will be fixed by the Coconut Development Board.

4.5 Conditions to be satisfied by the applicants for cutting and replanting and rejuvenation

- The palms identified for cutting and removal in the cluster should be yielding less than 10 nuts / year.
- The palms to be cut and removed should be clearly marked.
- The palms identified by the cluster for removal will be approved by the local Agriculture Officer.
- Cutting and removal of the palm identified should be completed within 3 months of the approval. The time limit can be relaxed by the State Government/UT Admn if there is sufficient justification to be communicated to the DO.
- The applicant should use only quality coconut seedlings for replacement planting. The seedlings should be procured from nurseries of State Department of Agriculture/ Horticulture or State Agricultural Universities/ CDB/ CPCRI or private nurseries assisted by CDB/ State Dept/ UT Admn.
- While replanting the palm population should not exceed 175/ha subject to the limitation of topography.

- Replacement planting/replanting in all cases should be completed within 12 months of uprooting.
- Prior to commencement of replanting the soil/pits should be made suitable for replanting.
- Soil testing should be carried out through recognized soil testing labs.
- The proposed garden for rejuvenation should not be an abandoned garden (or) should not belong to an absentee land lord.
- The existing palms in the garden should be potentially healthy for being rejuvenated.
- The area to be rejuvenated will be surveyed and all the basic data of the garden/ farmer will be recorded.
- Farmers in the cluster will be linked to credit institutions for availing credit facilities.

4.6 Benefit of the project

It is expected that the project will result in cutting and removal of approximately 143.593 lakh disease affected palms, rejuvenation of coconut gardens in an area of 1.35 lakh ha in three selected districts of Kerala and Andaman Nicobar Islands, which will increase productivity of coconuts. Additional income and employment generated through coconut based integrated farming system will improve the livelihood security of small and marginal farmers'/agricultural workers in coconut sector and result in increased production of 150-650million nuts at value of ₹ 75-325 crore per year.

Chapter 5
Analysis and Interpretation

Replanting and Rejuvenation of Coconut gardens is a centrally sponsored scheme aimed for the total removal of all disease advanced , unproductive, old and senile palms followed by re-plantation.

This chapter deals with the analysis of the primary data collected through the sample survey conducted in *Oachira* and *Kottarakkara* block panchayats in Kollam district during the period from February to march 2013 and the analysis of secondary data related to this topic.

5.1. Physical and Financial targets and achievements of the scheme under the component Cutting and removal of coconut palms

A. Oachira Block Panchayat

Oachira block panchayat consists of 6 grama panchyats viz. Kulasekharapuam, Oachira, Thazhava, Clappana, Alappad and Thodiyoor.

Total area identified for implementing the scheme in *Oachira* block panchayat is 4607.58 ha with 42906 numbers of beneficiaries and 151271 palms marked for removal with subsidy. The estimated cutting subsidy is of ₹ 617.06 lakhs.

An analysis of the secondary data reveals that out of the 42906 number of beneficiaries identified, the actual beneficiaries of the programme is 34818, i.e., achievement is 81.15%.

Out of the total number of 151271 palms identified for removal with subsidy about 140626 palms were removed, i.e, achievement is 92.96%

The estimated cutting subsidy of the programme in Oachira block is ₹ 617.06 lakhs of which an amount of ₹ 532.925 lakh has been released so far, i.e, achievement is about 86.37%.

Details are shown in the following table.

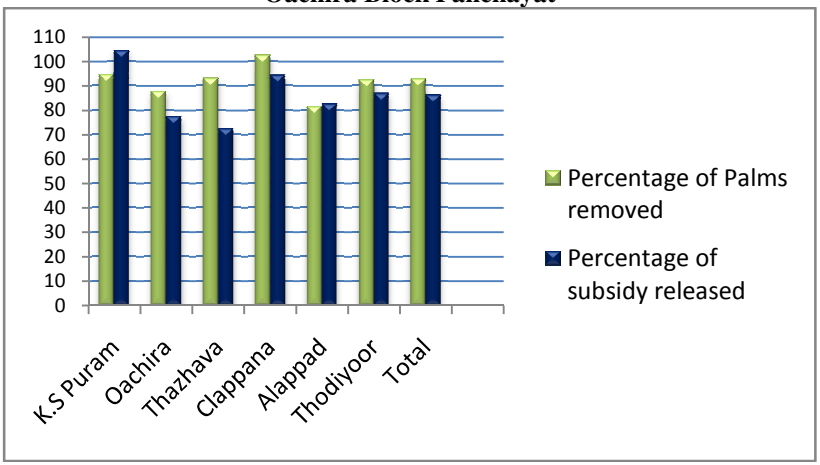
5.1 Achievement in number of palms removed &cutting subsidy released in each panchayats in Oachira block.

Name of Panchayat	No.of palms to be removed with subsidy	No.of palms removed	% of palms removed	Estimated cutting subsidy (Rs.in lakhs)	Cutting subsidy released (Rs.inlakhs)	% of subsidy released
K.S puram	44429	42070	94.69	147.77	154.58	104.6
Oachira	20865	18318	87.79	95.78	74.27	77.54
Thazhava	37016	34512	93.23	164.19	119.14	72.56
Clappana	12732	13065	102.62	57.51	54.32	94.45
Alappad	7689	6273	81.58	33.64	27.82	82.70
Thodiyoor	28540	26388	92.46	118.17	102.80	87.00
Total	151271	140626	92.96	617.06	532.93	86.37

Source:- Primary data

The following figure shows the percentage of achievement in number of palms removed and cutting subsidy released.

5.1 Achievement in Palms removed and cutting subsidy released in Oachira Block Panchayat



Source:- Primary data

B. Kottarakkara Block Panchayat

Kottarakkara block Panchayat consists of 6 grama panchayats viz Ezhukone, Kareepra, Kottarakkara, Neduvathoor, Pooyappally and Veliyam.

Total area identified for implementing the scheme in the block panchayat is 3310 ha with 20502 beneficiaries. Total palms identified for cutting under this scheme is 53387 with an estimated total cutting subsidy of 266.15 lakhs.

A analysis of the secondary data reveals that out of the 20502 beneficiaries identified 11832 number of persons benefited from the scheme, i.e, the percentage of achievement is 57.71

Out of the total number of 53387 palms identified for cutting, only 37811 palms were removed so far i.e, 70.82% is achieved.

The estimated cutting subsidy in *Kottarakkara* block is ₹ 266.15 lakhs. Data shows that an amount of ₹ 187.93 lakh is released from 2010-13 as cutting subsidy, i.e., 70.61 % of the allotted amount is released as cutting subsidy. Details are shown in the following table

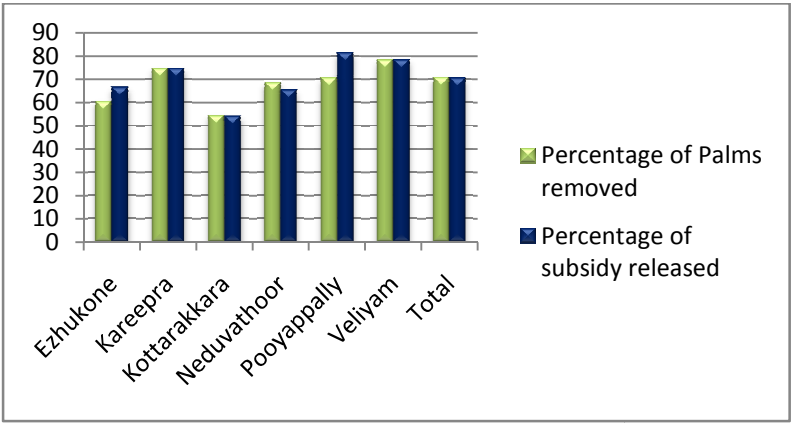
5.2 Achievement in of palms removed cutting subsidy released in each panchayat in Kottarakkara block.

Name of Panchayat	No. of palms to be removed with subsidy	No. of palms removed	% of palms removed	Estimated cutting subsidy (Rs.in lakhs)	Cutting subsidy released (Rs.in lakhs)	% of subsidy released
Ezhukone	6621	4069	60.54	33.08	22.02	66.57
Kareepra	10186	7613	74.74	50.79	37.95	74.72
Kottarakkara	75955	3244	54.48	29.73	16.11	54.19
Neduvathoor	3458	2372	68.59	17.29	11.31	65.41
Pooyappally	9238	6526	70.64	40.06	32.6	81.38
Veliyam	17929	14047	78.35	89.2	69.94	78.41
Total	53387	37811	70.82	266.15	187.93	70.61

Source:- Primary data

The following figure shows the percentage of achievement in no of palms removed and cutting subsidy released.

5.2 Achievement in Palms removed and cutting subsidy released in Kottarakkara Block Panchayat



Source:- Primary data

Comparative analysis of data in both the block panchayat in cutting of palms and release of cutting subsidy shows that in *Oachira* block 92.96% of the palms identified for cutting can be removed while in Kottarakkara block the percentage is 70.82. In the case of release of cutting subsidy 86.37% achievement is made by the Oachira block panchayat whereas the percentage of achievement in *Kottarakkara* block is 70.61. This shows that the percentage of achievement is higher in the Ist phase of the implementation of the scheme.

Interpretation

In the above analysis it is evident that the achievement in number of palms removed in Oachira panchayat 92.96% and cutting subsidy released is 86.37%. It shows that subsidy is not released up to the extent of the palms removed. Likely reason for this is that some farmers could not get the cutting subsidy due to the difficulty in producing proper records on time and in some cases the cluster conveners failed in producing reports on time.

Palms marked for removal are not completely removed. This is due to the lack of cutting people in some areas and in some cases beneficiaries are charged for cutting trees. So that beneficiaries are not willing to cut their trees.

5.2 **Analysis of the primary data**

The major components of the Re-plantation and Rejuvenation programme are

1. Cutting and removal of all disease affected palms followed by replantation
2. Rejuvenation of existing gardens
3. Assistance for replanting

Hence an attempt is made to analyze beneficiary's knowledge about the component of the scheme and how far the programme succeeded in achieving its objectives.

5.2.1 Awareness about the scheme

Analysis of the primary data reveals the following results.

In *Oachira* block panchayat out of the 30 respondents 29 respondents, i.e., 96.67% is aware of the scheme and same is the response in Kottarakkara block panchayat.

But awareness regarding the components of the scheme, 86.67% of the total respondents in Oachira panchayat are aware that the scheme include cutting& removing, distribution of cutting subsidy, rejuvenation and assistance for replanting .The remaining 13.33% have different opinions.

But in *Kottarakkara* block panchayats only 66.67% of the total respondents are aware of the full components of the programme.

Interpretation

The above analysis reveals that people are aware about the scheme but not fully aware of the components of the scheme. This may be due to the lack of awareness programmes about the scheme.

5.2.2 Components of the Scheme

A**. Cutting and removal of palms**

With regard to the cutting of palms 40% of the respondents in *Oachira* block reveal that they are benefited by cutting less than 5 palms and 26.67 % of the respondents reveal that about 6 to 10 number of palms were removed under this scheme and 33.33% reveal that more than 10 no. of palms were removed under his scheme.

In *Kottarakkara* block under the heading cutting of palms about 80% of the beneficiaries having less than 5 palms identified for removal and the remaining 20% have palms of about 6 to 10 numbers for removal.

The analysis is shown in the following table.

5.3 Proportion of palms removed

Name of Block	Percentage of palms removed			
	0-5 Nos	6-10 Nos	More than 10 Nos	Total
Oachira	40	26.67	33.33	100
Kottarakkara	80	20	-	100

Source :- Primary data

This analysis reveals that in *Oachira* block under the heading cutting of trees about 60% of the farmers were benefitted by cutting more than 6 number of disease affected and unproductive palms as part of this programme.

Interpretation

Fromthe above analysis it is clear that disease affected palms are more in Oachira block than in Kottarakkara block. Even though the area under coconut cultivation is higher in Kottarakkara block than in Oachira block, the intensity of disease is higher in Oachira block than in Kottarakkara block so also the number of disease affected palms removed is higher in Oachira block than in Kottarakkara block panchayat.

Types of palms removed

Analysis of the primary data regarding the types of palms removed reveals the following results. In *Oachira* block 36.67% of the total respondents are of the view that their old, disease affected and unproductive palms were removed under the scheme and 50% opined that only their disease affected palms were removed and remaining 13.33% are of the view that their unproductive and old palms were removed.

The situation in *Kottarakkara* block panchayat is that about 73.33% of the respondents reveal that there old unproductive and disease affected palms were removed under this scheme and 16.67% opined that only their disease affected palms were removed and the remaining 10% reveal that only their unproductive and old palms were removed as part of this scheme. Percentage of the type of palms removed is shown in the following table.

5.4 Percentage of the types of palms removed

Name of Block	% of types of palms removed			
	Disease affected	Old and unproductive	All Types	Total
Oachira	50	13.33	36.67	100
Kottarakkara	16.67	10	73.33	100

Source:- Primary data

Interpretation

From the above analysis it is evident that disease affected, unproductive, old and senile palms were identified and also removed as part of this programme.

a. Complete removal of disease affected palms

One of the remedies suggested to control the root wilt disease is the complete removal of disease advanced old and senile palms and the adoption of integrated management practices for nurturing the mildly affected palms back to health. In order to understand whether the programme succeeded in removing all disease affected palms, the survey reveal that about 73.35 % of the respondents in *Oachira* Block opined that disease affected palms can be removed completely whereas the 26.66% opined that there are palms yet to be removed under the category of disease affected old and senile.

In *Kottarakkara* block panchayat about 66.67% of the respondents are of the opinion that their disease affected palms can be completely removed under this scheme and the remaining 33.33% are of the opinion that there are disease affected palms yet to be removed.

5.5 Percentage of complete removal

Name of Block	% of complete removal		Total
	Yes	No	
Oachira	73.34	26.66	100
Kottarakkara	66.67	33.33	100

Source:- Primary data

This analysis reveals that the programme achieved more in removing the disease affected palms in *Oachira* Block than in Kottarakkara Block.

The analysis of the secondary data in this category also shows the same result, i.e., the achievement of the programme in the removal of disease affected palms is higher in Oachira Block than in *Kottarakkara* block.

Interpretation

From the analysis it is clear that the programme could not achieve the target of complete removal of disease affected palms as it was envisaged. This may be due to the following reasons:-

- Some cluster conveners are not actively involved in the process of identification of palms for removal and cutting of the same.
- Lack of cutting people in some areas resulted in the failure of achieving the target.
- In some areas cluster conveners demanded ₹ 100 to ₹ 200 for each palm as cutting charges from the beneficiaries. So that they are not ready to cut their palms.
- In some cases clusters not clearly marked the palms for removal.

B. Replanting

Under the scheme, cutting and removal of disease affected palms will be followed by a systematic replanting programme which aimed at 50% of replantation to maintain optimum and sustainable density. For this seedlings were distributed as part of thisprogramme.

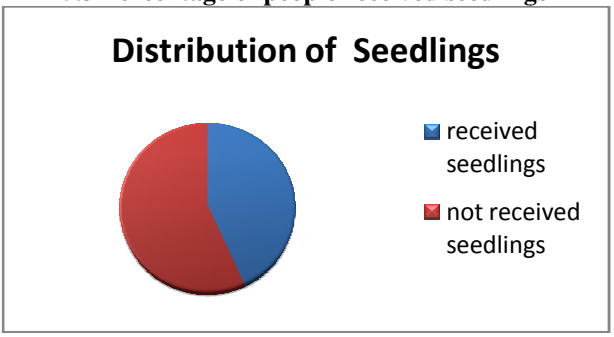
a. Distribution of seedlings

Regarding the distribution of seedlings and its quality, analysis of primary data in the study area shows the following results. Data regarding the distribution of seedlings yield same result in both panchayat.

In *Oachira* and *Kottarakkara* block panchayat, out of the 30 respondents 43.33 % of the respondents told that they got seedlings after cutting the palms where as 56.67% of the respondents told that they are not given any seedlings.

Percentage of respondents who got seedlings as part of the programme are shown in the following figure.

5.3 Percentage of people received seedlings



Source:- Primary data

Interpretation

The above analysis reveals that less than 45% of the respondents in the study area got seedlings for replanting. The likely reasons are:

1. The programme envisaged that seedlings should be procured from nurseries of the State Department of Agriculture/ Horticulture, Agricultural Universities, CDB etc. In our state it is mainly procured from the nurseries of the State Department of Agriculture CDB's farms. Even though, the farms are producing its full capacity but the demand exceeds the supply, i.e., adequate seedlings are not available.
2. In some areas people did not purchase the seedlings from the clusters as they are not interested in replanting coconut instead they replanted banana, Rubber etc in the place of coconut palms removed.
3. Distribution of seedlings is charged by the cluster conveners in some areas. So the beneficiaries are not ready to purchase seedlings.
4. Seedlings were procured but not distributed to the beneficiaries by the cluster conveners in some areas.
5. Some clusters procured seedlings but seedlings were decayed due to the lack of proper attention given to them.

b. Quality of Seedlings

With respect of the quality of seedlings distributed, of the 13 respondents who got seedlings in *Oachira* block panchayat are of the opinion that the seedlings distributed are of good quality. In *Kottarakkara* block out of the total respondents who got seedlings 76.92% are of the opinion that seedlings distributed are of good quality and 15.38 % of respondents have no opinion regarding this and the remaining are of the opinion that the seedlings distributed are of bad quality.

This analysis shows that on average quality seedlings are distributed as part of this programme.

Interpretation

Seedlings distributed as part of this programme are procured from the nurseries of the Department of Agriculture and from CDB and hybrid seedlings were distributed as part of this programme.

C. Re-plantation

Out of the total 30 respondents in *Oachira* block panchayat 43.33 % of the respondents got seedlings and they planted it, whereas in *Kottarakkara* block panchayat out of the 30 respondents 43.33% got seedlings. Of this 92.31% planted it but the remaining could not.

From the analysis of the distribution of seedlings and replanting it is understood that the programme could not achieve much in replanting as it was targeted.

Interpretation

As seedlings are not made available for replanting and procured seedlings are not distributed, the programme could not achieve the target of 50 % replantation. Lack of interest of farmers in coconut cultivation in some areas also adds to this. But those who avail seedlings replanted it.

D. Purchase of seedlings

Analysis of the data regarding the purchase of seedlings in both the block panchayats yields the same result, i.e., out of the 13 respondents who had received seedlings in both the panchayat purchased the same from the clusters.

5.3 Soil Testing

The programme envisages that soil testing should be carried out before re-plantation. According to the data collected it is understood that in *Oachira* panchayat 70% of the respondents knew that there is soil testing facility in the panchayat but only 10% of the respondents had tested soil before replanting.

In *Kottarakkara* block panchayat 36.67% of the respondents knew that there is soil testing facility in the panchayat but only 16.67% of the respondents tested their soil before planting the seedlings.

Interpretation

Even though majority of the people are aware about the soil testing facility in the panchayat but are not willing to test their soil before replanting. This may be that they do not give much importance to soil testing before replanting and no awareness programmes were given to the farmers emphasizing the need for testing soil before replanting.

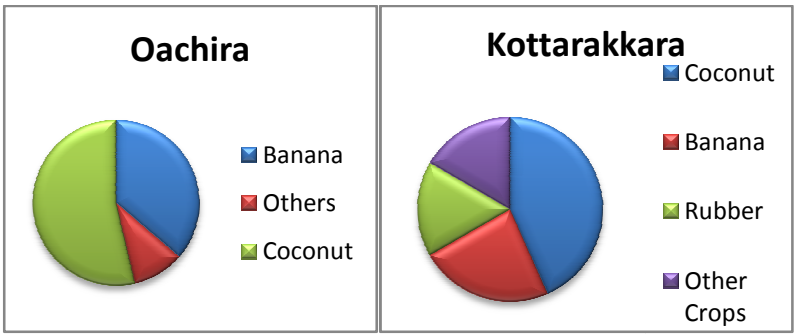
5.4. Crop cultivation (Management of Crops) after cutting and removal of palms

Analysis of the primary data shows that after cutting and removing disease affected, old senile and unproductive palms 53.33% of the respondents in **Oachira** block panchayat reveal that they have been cultivating coconut in the place of palms removed whereas 36.67% of the respondents reveal that they have cultivated banana crop in the place of coconut garden and 10% cultivated other crops in the place of coconut gardens after removal.

In **Kottarakkara** block panchayat only 43.34% of the respondents' replanted coconut after removal of palms whereas 23.33% cultivated banana crop and 16.67% cultivated rubber and the remaining 16.66% cultivate other crops in the place of coconut cultivation after removal of palms.

Comparative analysis of the crop cultivation in both the block panchayat is shown in the following figure.

5.4 Crop cultivation after removal of palms



Source:- Primary data

Interpretation

The result of the analysis reveals the fact that the programme could not achieve the target of 50% re-plantation as it envisaged. It shows that farmers are moving away from coconut cultivation after cutting and removal of palms. Farmers are reluctant to cultivate coconut due to the following reasons.

1. Low yield compared to other crops.
2. Un remunerative nature of cultivation.
3. Non availability of hybrid seedlings.
4. High gestation period compared to other crops.

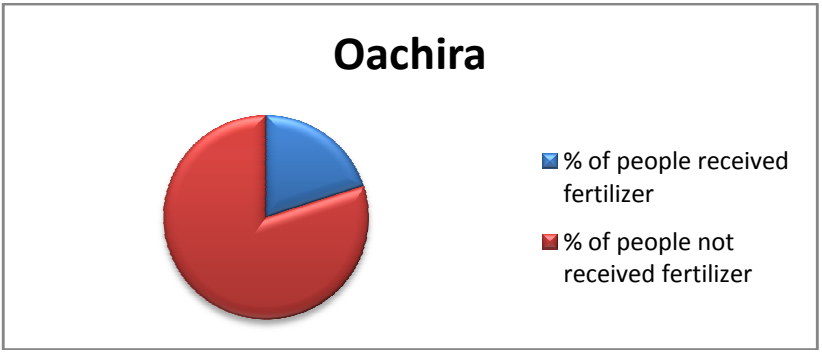
5.5 **Rejuvenation Programme**

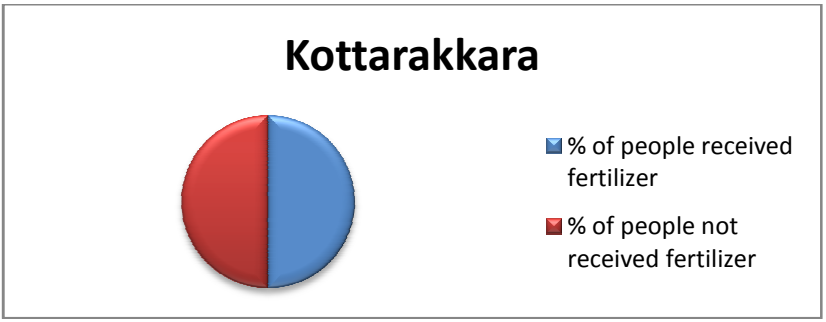
The scheme envisages the rejuvenation of existing gardens through integrated management practices. This includes balanced nutrition through fertilizer application ie, the scheme provided fertilizers for rejuvenating the existing gardens.

In *Oachira* block panchayat regarding the distribution of fertilizers 80% of respondents opined that fertilizers were provided for rejuvenating the existing garden as part of the programme whereas in *Kottarakkara* block only 50 % of the respondents opined that fertilizers where distributed as part of the programme.

The following figure shows the percentage distribution of fertilizers in the study area

5.5 Percentage Distribution of Fertilizers





Source:-Primary data

Interpretation

The above analysis reveals that about 50 per cent of the respondents in Kotarakkara block and 20% of the respondents in Oachira block did not get fertilizers as part of this programme. Likely reasons are:

1. Fertilizers are distributed along with the distribution of seedlings in most of the clusters. Those who did not avail/ get the seedlings did not avail / get fertilizes.
2. Some beneficiaries did not avail the fertilizers as they demand organic fertilizers but chemical fertilizers were provided as part of this programme.
3. Beneficiaries failed to provide adequate records for availing fertilizers.

5.6 Distribution of subsidy amount

A subsidy of ₹ 500 per palm for the first 20 palms, ₹ 250 per palm for subsequently removed palms subject to a maximum of ₹ 13,000/ha is provided to the farmers as cutting subsidy as part of this programme.

Analysis of the primary data shows that about 86.67% of the respondents, i.e., 26 numbers obtained cutting subsidy in *Oachira* Block panchayat. Of the 26 respondents, 22 respondents, i.e., 73.33 % received the same from Agricultural Officers and the remaining 26.67% received the cutting subsidy through banks.

In *Kottarakkara* block panchayat about 17 respondents, i.e., 56.67% of the total received cutting subsidy. Of the 17 respondents, 15 numbers, i.e., 88.23% received it through Agricultural Offices and the remaining 11.77 received the same through banks. This is shown in the following table.

5.6 Percentage of people received cutting subsidy and the medium though it is received

Name of Block	Subsidy		Total	Medium		Total
	% Received	% not received		% received though A.O	% received though banks	
Oachira	86.67	13.33	100	73.33	26.67	100
Kottarakkara	56.67	43.33	100	88.23	11.77	100

Source:- Primary data

Interpretation

The above analysis of primary data shows that about 13.33% of the respondents in Oachira block and 43.3 % of the respondents in Kottarakara block did not get cutting subsidy. The secondary data also shows the result that about 13% of the estimated cutting subsidy is not released in Oachira block panchayatand about 30% of the estimated cutting subsidy is not released in Kottarakkara block. The reasons are:

1. Failure to produce adequate land records, i.e., land tax receipt.
2. Cluster convenors are not followed any norms in distributing subsidy as envisaged in the project.
3. Failure to produce inspection reports by the cluster convenors on time.
4. In the second phase of the programme there are pending claims yet to be settled by the CDB.

5.7 Time Gap in receiving benefits under the scheme

a. Cutting Subsidy

The programme envisages that cutting and removal of palms should be completed within 3 months and after inspection subsidy of the same is to be released.

Analysis of the data collected from *Oachira* block shows that out of the 30 respondents 26 respondents received cutting subsidy. Of the 26 respondents 15.38% received it within 3 months whereas 65.38% received it within 6 months and 19.23% received the same within 12 months.

In *Kottarakkara* block out of the 30 respondents 17 respondents received cutting subsidy. Of the 17 respondents, 11.76% got it within 3 months whereas 70.59% received it within 6 months and 17.65% received the same within a period of 12 months. The result of the analysis is shown in the following table.

5.7 Time gap in receiving cutting subsidy

Name of Block	% of respondents received cutting subsidy			
	0-3 Months	3-6 Months	6-12 Months	Total
Oachira	15.38	65.38	19.23	100
Kottarakkara	17.76	70.59	17.65	100

Source:- Primary data

Interpretation

Even though it is envisaged in the scheme that cutting subsidy is to be released within 3 months after cutting and removal of palms. But the analysis reveals the fact that of the beneficiaries who received cutting subsidy, only less than 16% got it within 3 months and about 70% got within 6 months. Which means that the time frame stipulated in the scheme is not maintained. This may be due to the delay in submitting reports on time.

b) Distribution of seedlings

The scheme envisages that replanting should be completed within 12 months of uprooting. Data reveals that in *Oachira* block 13 persons got seedlings for replanting of which 15.38 %of the respondents reveal that they got seedlings with 3 months and 7 respondents, i.e., 53.85% opined that they

received the seedlings within 6 months and the remaining 38.46% of respondents got it within 12 months.

In *Kottarakkara* block panchayat out of the 13 respondents 15.38% got the seedlings within 3 months of uprooting and 76.92% got seedlings within 6 months of uprooting's and 7.6% got it within 12 months of uprooting. Result of the analysis is shown in the following table.

5.8 Time gap in receiving seedlings

Name of Block	% of respondents received seedlings			
	0-3 Months	3-6 Months	6-12 Months	Total
Oachira	15.38	38.35	38.46	100
Kottarakkara	15.38	76.92	7.6	100

Source:- Primary data

Interpretation

Regarding the distribution of seedlings the programme envisaged that it should be completed within 12 months of uprooting. From the analysis of primary data it is evident that those who receive seedlings got it within 12 months of uprooting. Time frame stipulated in the scheme can be maintained in this respect.

c) Distribution of Fertilizers.

Fertilizers were distributed for rejuvenating the existing garden as part of the programme.

In *Oachira* block panchayat out of the 24 respondents who had received fertilizers as part of the programme pointed out the following.

Of the total, 8.33% of the respondents received it within 3 months 56.33% received it within 6 months and 33.34% received fertilizers within 12 months. In *Kottarakkara* block 26.67% got fertilizers within 6 months and the remaining 73.33 got it within 12 months and none received it within 3 months.

5.9Time gap in receiving fertilizers

Name of Block	% of respondents received fertilizers			
	0-3 Months	3-6 Months	6-12 Months	Total
Oachira	8.33	56.33	33.34	100
Kottarakkara	-	26.27	73.33	100

Source:- Primary data

5.8 Role of clusters

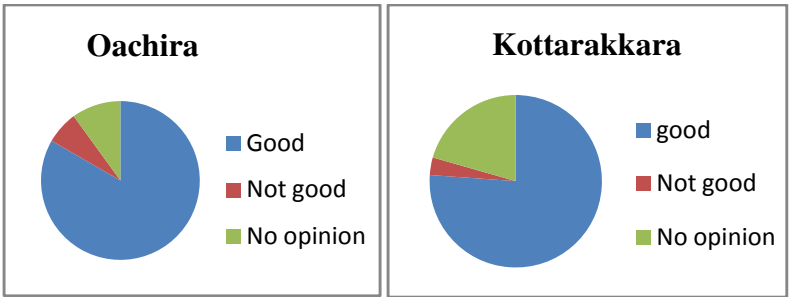
One of the salient features of the programme is that the programme commence in contiguous area of atleast 25-50 hectare where farmers have formed themselves into a group as coconut clusters. Each cluster will have an elected cluster convener and sub group leaders. In Kerala each ward in the panchayatact as a cluster.

The opinion of the people regarding the working of clusters in *Oachira* and *Kottarakkara* block are as follows.

In *Oachira* block panchayat about 83.33% of the respondents are of the view that cluster activities are good in implementing the scheme and 6.67% are of the view that cluster activities are not good and 10% have no opinion regarding the working of clusters.

In *Kottarakkara* block about 76.67% of the respondents opined that cluster activities are good in implementing the scheme whereas 3.34% opined that the working of clusters is not good and 20.7% have no opinion regarding the working of clusters in implementing the programme.

5.6 Opinion regarding the working of clusters



Interpretation

From the analysis it is evident that clusters played an important role in implementing the programme. But there are some lags in the working of clusters pointed out by the beneficiaries. They are:

1. Cluster conveners are not followed any norms in distributing subsidies.
2. Cluster conveners fail to submit inspection reports of cutting on time. This cause delay in releasing cutting subsidies.
3. Fertilizers and seedlings are not distributed on time.
4. Beneficiaries are charged for cutting of palms, distributing seedlings and fertilizers in some clusters.

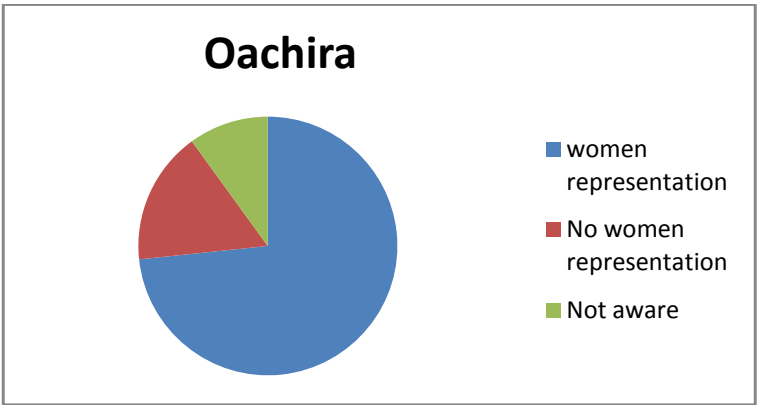
5. Procured seedlings are not distributed to the beneficiaries by some cluster conveners.
6. Cutting subsidy released is not distributed in equal proportion.

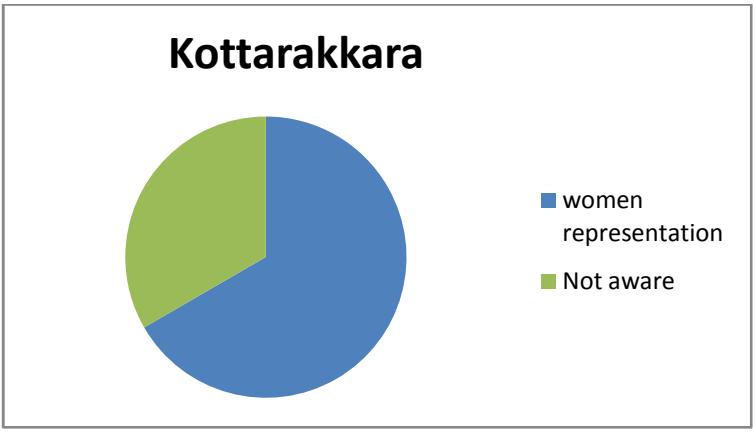
5.9 Clusters and women representation

Regarding the representation of women in clusters, the opinion of the respondents in *Oachira* panchayat is that about 73.33% of the respondents are aware that there is women representation in the clusters and 16.67% reveal that there is no women representation and 10% of the respondents are not aware about the representation of women in the cluster.

In *Kottarakkara* block panchayat about 66.67% of the respondents opined that there is women representation in the cluster and the remaining 33.33% are not aware about the representation of women in the clusters.

5.7 Opinion regarding women representation in clusters





Interpretation

In the above analysis it is clear that there is adequate women representation in the clusters.

In Kerala under this programme each ward act as a cluster and in most cases the ward members act as cluster conveners. As there is 50% reservation of women in local bodies, naturally in this situation there is adequate women representation in the clusters also.

5.10 Role of women in the working of clusters

Regarding the role of women in the working of clusters, in *Oachira* block panchayat out of the 22 respondents who are aware about the representation of women in the clusters opined that women representation in clusters resulted in the improvement of its functioning.

In *Kottarakkara* block panchayat out of the 20 respondents who are aware about the representation of women in the clusters, 80% opined that women representation played an important role in improving the working of clusters and 15% of the respondents have the opposite view and the remaining 5% opined that due to women representation corruption can be reduced to some extent.

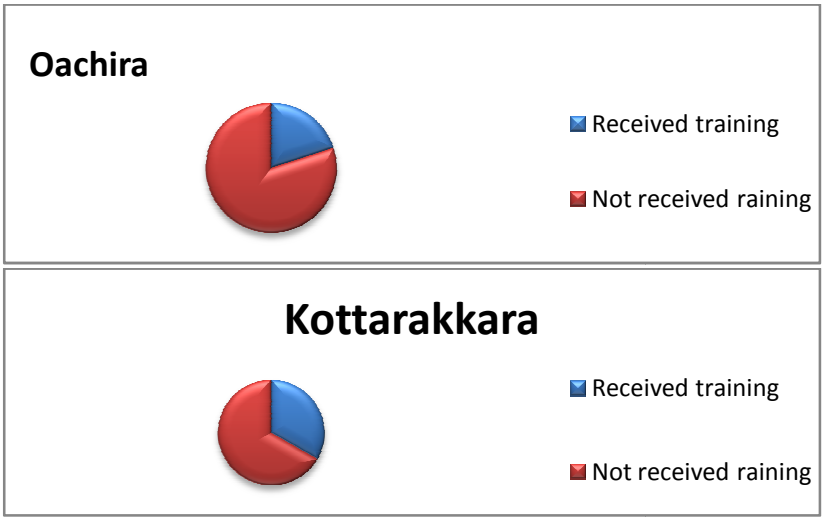
From the analysis it is clear that women played an important role in the working of clusters.

5.11 Training

One of the components of the scheme is training and capacity building. It aimed that training will be imparted to farmers in scientific management of coconut palms.

The analysis of the data reveals that 80% of the respondents in *Oachira* block did not receive any training as part of this scheme whereas in *Kottarakkara* block the corresponding percentage is 66.67%. The percentage of people received training shown in the following figure.

5.8 Percentage of people received training



Source:- Primary data

Interpretation

The above analysis reveals the fact that training in scientific management of coconut cultivation as envisaged in the project is not executed by the cluster convenors/ Agricultural Officers.

5.12 Role of Agricultural Offices in implementing the programme

About 76.67% of the respondents in *Oachira* block panchayat opined that Krishi Bhavans played an important role in implementing, providing

technical guidance and monitoring the scheme. In *Kottarakkara* block about 60% of the respondents opined the same.

5.13 Respondents opinion regarding the benefits of the programme

Majority of the respondents in both Oachira and Kottarakara block panchayats are of the opinion that as the programme is implemented through the clusters, it resulted in the speedy identification of disease affected palms, submitting project, cutting palms, distribution of subsidy etc. The main benefit of the programme pointed out by the respondents is that disease affected old and senile palms can be removed as part of this programme so that the spread of disease can be controlled to some extent.

5.14 Respondents opinion regarding the defects of the programme

It is opined by most of the respondents that even though the programme can succeeded in identifying and cutting of disease affected old and senile palms, release of cutting subsidy is not reached to all the beneficiaries in equal proportion and seedlings are not distributed to all the beneficiaries. Sometimes beneficiaries are even charged of ₹ 50 to ₹ 100 for each palm as cutting charges by the cluster convenors. In some areas seedlings were distributed by charging price. Same is the case with the distribution of fertilizers. Benefits of the programme are not received by the beneficiaries on time. In some panchayats seedlings are purchased but not distributed to the farmers.

Chapter 6
Summary of findings and suggestions

Coconut is a small holder's crop in Kerala. Fragmented holdings, scattered production, the homestead nature of cultivation, the high incidence of pest and disease and large stock of senile palms are the main reasons for the low production and productivity of coconut in the state. This has made coconut cultivation un-remunerative in the State. Of this, severe incidence of pest and disease are the reasons for low productivity. Hence it is decided to implement the pilot project Replanting and Rejuvenation of coconut gardens in the severely disease affected district of Kollam, Thiruvananthapuram and Thrissur in the State.

The broad objective of the study was to examine the process of implementation of the scheme and its time frame and to study the improvement in the cluster activities. Based on the broad objectives specific objectives are framed for the study.

Findings of the study and suggestions are summarized as follows.

6.1 Findings

- Analysis of the secondary data in the study area shows that under the heading cutting and release of cutting subsidy both the block panchayats could not achieve the target and also the achievement in the coastal belt is higher in the midland regions.
- More than 85% of the people in Oachira block and 60% of the people in Kottarakkara block are aware about the programme and its components and the process of implementation.
- Primary data shows that more disease affected palms in coastal regions (73%) are removed under the programme than in the midland regions (66.6%). The corresponding percentage in terms of secondary data is 90.92% and 70.82 % respectively in coastal and midland regions.
- The intensity of disease is higher in coastal areas than in the midland region.
- The scheme aimed for the total removal of disease affected palms, but the result of the analysis shows that about 27% of the disease affected palms in coastal areas and 34% of the disease affected palms in midland regions are yet be removed.
- The scheme aimed for 50% re plantation but it could not achieve the same. Data regarding distribution of seedlings and re-plantation shows that about 43.33% of the respondents received seedlings for replanting.

- Reason for the low distribution of seedlings is that as per the programme Hybrid seedlings are distributed and are purchased from the Department farm and from CDB's farm. Even though the farms are producing in full capacity but demand exceeds the supply.
- Cutting subsidy is not distributed in equal proportion.
- Clusters played an important role in identifying the disease affected palms, distributing seedlings and fertilizers etc.
- Soil testing is not carried out properly before replanting. Only about 10% and 16.67% of the respondents respectively in *Oachira* and *Kottarakkara* block tested the soil before replanting.
- After removal of disease affected unproductive and old palms about 54% of the respondents in Oachira block and 44% of the respondents in *Kottarakkara* block cultivated coconut in the place of palms removed. It shows that about 50% of the farmers give up coconut cultivation after removal of disease affected palms.
- Rejuvenation programme is not properly carried out.
- In the midland region, i.e., in Kottarakkara block panchayat primary data shows that about 44% of the respondents did not receive cutting subsidy till date, i.e., it is pending.
- Time frame of implementation of the scheme is not maintained.
- Clusters are adequately represented by women in each block panchayats.
- Women representation in clusters played an important role in the functioning of clusters and for the implementation of the programme.
- Adequate training for scientific management of coconut cultivation is not provided as part of the implementation of the programme in the study area.
- Clusters, Krishi bhavans and credit institutions supported the programme.

6.2 Suggestions

The ways suggested for improving the implementation process and reducing the gaps in the implementation of the programme are as follows.

6.2.1 Strengthening of Monitoring

a) Monitoring by the Department

- The implementation process of the scheme should be monitored by the Horticultural Assistant appointed for the same, by the cluster conveners, Agricultural Officers and the concerned local bodies.

- The Horticultural Assistant appointed for monitoring should help the cluster conveners in preparing and submitting the projects on time. Agricultural Officers should verify the projects accordingly and it should be closely monitored by the local bodies concerned.
- Status of scheme implementation should be submitted weekly.

b) Scheme monitoring

- Input supply as well as its distribution

  Steps should be taken to provide adequate supply of necessary inputs as well as its distribution.
- Integration of livestock capital

  Adequate steps to be taken to integrate livestock capital in the holding so as to improve the availability of organic inputs for application in palms.
- Strengthening of clusters

  Capacity building of the clusters should be given prime importance to popularise the scientific management of palms.

  Operation support of the farmers also extended to increase the activities of the clusters.

6.2.2Training

a) Awareness training

- Before implementing a pilot project adequate training should be imparted to beneficiaries about the scheme, its components, benefits and timeframe.
- Frequent awareness training programmes should be given to the beneficiaries' inorder to familiarize the components and implementation stages of the programme.

b) Training programmes on scientific management of palms

- Training should be imparted to all farmers on the scientific management of coconut palms inorder to make coconut cultivation profitable.
- Department of Agriculture, KVK and CDB should take initiative in imparting training in this regard.
- Training materials should be made available while conducting such training programmes.
- A demonstration plot on scientific management of palms to be established.

6.2.3 Distribution of Quality Seedlings

- CDB and Department of Agriculture should take adequate steps in advance to distribute quality seedlings.
- Necessary tie up should be made for the production and distribution of elite quality seedlings.
- Priority should be given to distribute elite seedlings in disease affected areas.
-

6.2.4 Soil Testing

- Make the farmers aware that soil testing is important before replanting crops
- Department of Agriculture and local bodies should take adequate steps to establish soil testing laboratories in each panchayat.
- Necessary tie ups should be made by the department of Agriculture and local bodies with KVK and CPCRI for soil testing and the supply of adequate micro nutrients.

6.2.5 Streamlining of Implementation

- Identification of disease affected palms should be completed within the time limit prescribed in the scheme and with the co operation of cluster conveners and beneficiaries.
- Delay in cutting and inspection of the same should be avoided.
- A mechanism should be adopted to speed up the submission of reports.
- Norms for releasing subsidies should be made easy.

6.2.6 Encourage Scientific Management of Cultivation

- Promote multi -tier cropping system and integrated farming in order to increase income of the farmers.
- Addition of live stock as well as annual crops to be added to increase income.
- Promote mixed cropping in coconut palms.

6.2.7Recommendations

- CDB should establish a complaint redressal mechanism.
- A toll free number for complaint registration is to be established.
- A system to be established in order to monitor the working of clusters by the local bodies.

The project aimed for cutting and removal of all disease affected, unproductive, old and senile palms and rejuvenation of existing coconut gardens in the district. Even though the programme made about 75% achievement in cutting and removal and distribution of cutting subsidy. But it could not achieve much in re-plantation and rejuvenation of the existing gardens. There are deficiencies in the distribution of cutting subsidy, distribution of seedlings and distribution of fertilizers. But clusters and women played an important role in implementing the programme.

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തെങ്ങ് പുനരുദ്ധാരണ പദ്ധതി പ്രവർത്തന പഠനം- 2012 - 13

ജില്ലാ പ്ലാനിംഗ്ആഫീസ്, കൊല്ലം

അവലോകന ചോദ്യാവലി

1.

ബ്ലോക്ക് പഞ്ചായത്ത്	ഗ്രാമ പഞ്ചായത്ത്	ക്ലസ്റ്റർ/ വാർഡ് നമ്പർ

2.

ഗുണഭോക്താവിന്റെ പേര്	
പുരുഷൻ :	സ്ത്രീ:

3.തെങ്ങ് പുനരുദ്ധാരണ പദ്ധതിയെക്കുറിച്ച്താങ്ങൾക്ക്ബോധ്യമുണ്ടോ?

ഉണ്ട്	ഇല്ല

4. പദ്ധതി ഘടകങ്ങൾ താഴെചേർത്തവയിൽഏതാണ്

തെങ്ങ്മുറിച്ചു മാറ്റൽ	തുകവിത രണംചെയ്യൽ	തൈ നൽകൽ	വളം നൽകൽ	ഇവ യെല്ലാം

5. തെങ്ങ് പുനരുദ്ധാരണ പദ്ധതി പ്രകാരംതാങ്കൾക്ക്എത്ര തെങ്ങ് (എണ്ണം) മുറിച്ചുമാറ്റേണ്ടിവന്നിട്ടുണ്ട്.

6. പദ്ധതി പ്രകാരംമുറിച്ചുമാറ്റിയതെങ്ങുകളുടെതരം

1-5 വരെ	6- 10 വരെ	11 ന് മുകളിൽ

രോഗമുള്ളവ	കായ് ഫലമില്ലാത്തവ	പ്രായമായവ

7. തെങ്ങ് പുനരുദ്ധാരണ പദ്ധതി പ്രകാരംതാങ്കളുടെകേടായതെങ്ങുകൾ പൂർണ്ണമായുംമുറിച്ചു മാറ്റാൻ സാധിച്ചിട്ടുണ്ടോ ?

ഉണ്ട്	ഇല്ല

8. മുറിച്ചുമാറ്റിയതെങ്ങുകൾക്ക് പകരം പുതിയതൈകൾലഭ്യമായിട്ടുണ്ടോ ?

ലഭ്യമായി	ഇല്ല

9. ലഭ്യമായതൈകളുടെഗുണനിലവാരത്തെക്കുറിച്ച്താങ്കളുടെഅഭിപ്രായം

ആരോഗ്യമുള്ളത്	ആരോഗ്യമില്ലാത്തത്	മോശപ്പെട്ടവ	അഭിപ്രായമില്ല

10. തെങ്ങുകൾക്കാവശ്യമായവളംലഭ്യമായോ ?

അതെ	ഇല്ല

11. പദ്ധതി പ്രകാരംമുറിച്ചുമാറ്റിയതെങ്ങുകൾക്ക്സബ്സിഡിതുകലഭ്യമായോ ?

അതെ	ഇല്ല

12. സബ്സിഡിതുകലഭ്യമായസംവിധാനം

കൃഷിഭവൻ	ബാങ്ക്	പോസ്റ്റാഫീസ്	നേരിട്ട്

13. ഈ പദ്ധതി പ്രകാരം ആനുകൂല്യങ്ങൾ ലഭ്യമായ ഇടവേളകൾ

13.എ. മുറിച്ചുമാറ്റിയതെങ്ങുകൾക്ക്സബ്സിഡിതുകലഭ്യമായത്

3മാസത്തിനുള്ളിൽ	6മാസത്തിനുള്ളിൽ	12മാസത്തിനുള്ളിൽ	ലഭിച്ചില്ല

13.ബി. പുതുതായിതൈകൾലഭ്യമായത്

3മാസത്തിനുള്ളിൽ	6മാസത്തിനുള്ളിൽ	12മാസത്തിനുള്ളിൽ	ലഭിച്ചില്ല

13. സി. തെങ്ങുകൾക്കാവശ്യമായവളംലഭ്യമായത്

3മാസത്തിനുള്ളിൽ	6മാസത്തിനുള്ളിൽ	12മാസത്തിനുള്ളിൽ	ലഭിച്ചില്ല

14. താങ്കൾക്ക്ലഭ്യമായ തൈകൾ നടുന്നതിന് സാധിച്ചോ ?

സാധിച്ചു	സാധിച്ചില്ല

15.താങ്കളുടെ പഞ്ചായത്തിൽമണ്ണ് പരിശോധന സംവിധനത്തിന്റെലഭ്യതയുണ്ടോ

ഉണ്ട്	ഇല്ല

16. പദ്ധതി പ്രകാരംലഭിച്ച പുതിയതൈകൾ നടുന്നതിന് മുമ്പ് മണ്ണ് പരിശോധന നടത്തിയിട്ടുണ്ടോ?

ഉണ്ട്	ഇല്ല

17 തൈകൾ ക്ലസ്റ്ററിൽ/ഗ്രൂപ്പിൽനിന്നുംവാങ്ങുന്നതിന്സാധിച്ചോ?

സാധിച്ചു	സാധിച്ചില്ല

18. മുറിച്ച്മാറ്റിയതെങ്ങിന് പകരംചെയ്യുന്ന കൃഷി

തെങ്ങ്	വാഴ	റബ്ബർ	മറ്റുവള്ളവ

19.ക്ലസ്റ്റർ/ഗ്രൂപ്പ്അടിസ്ഥാനത്തിലുള്ള പ്രവർത്തന രീതിയെ എങ്ങനെ വിലയിരുത്തുന്നു.

നല്ലതാണ്	നല്ലതല്ല	അഭിപ്രായമില്ല

20. ക്ലസ്റ്റർ/ഗ്രൂപ്പ് പ്രവർത്തനത്തെകുറിച്ചുള്ളഅഭിപ്രായം

കുറ്റമറ്റതായിരുന്നു	പക്ഷപാതപരമായിരുന്നു	ദിശബോധമില്ലാത്തതായിരുന്നു	അഭിപ്രായമില്ല

21. ക്ലസ്റ്റർ/ഗ്രൂപ്പ് ഘടനയിലെസ്ത്രീ പ്രാതിനിധ്യം

ഉണ്ട്	ഇല്ല	അറിയില്ല

22. എ.സ്ത്രീ പങ്കാളിത്തമുണ്ടെങ്കിൽഅതുമൂലം പദ്ധതി പ്രവർത്തനത്തിലുണ്ടായ നേട്ടം

പ്രവർത്തനം മെച്ചപ്പെട്ടു	പ്രവർത്തനത്തിൽമെച്ചമില്ല	അഴിമതികൂടി	അഴിമതികുറഞ്ഞു

23. തെങ്ങ് പുനരുദ്ധാരണ പദ്ധതിയുടെ ഭാഗമായിതാങ്കൾക്ക് നാളികേരവികസനപരിപാലനവു മായി ബന്ധപ്പെട്ട എന്തെങ്കിലുംപരിശീലനം ലഭിച്ചിട്ടുണ്ടോ?

ഉണ്ട്	ഇല്ല

24.പദ്ധതി പ്രവർത്തനത്തിൽകൃഷിഭവന്റെ ഇടപെടൽ, സാങ്കേതിക ഉപദേശം, മേൽനേട്ടം തുടങ്ങിയവകാര്യക്ഷമമായി നടന്നിട്ടുണ്ടോ.

ഉണ്ട്	ഇല്ല

25.പദ്ധതി ഭാഗമായി ഉൽപന്നത്തിന്റെസംഭരണം/ വിപണനത്തിന് പുതിയസംരംഭങ്ങൾ ആരംഭിച്ചിട്ടുണ്ടോ?

ഉണ്ട്	ഇല്ല

26. താങ്കൾക്ക്ഈ പദ്ധതിമൂലം ഉണ്ടായപ്രയോജനങ്ങൾ

1.
2.
3

27. ഈ പദ്ധതിയിലുണ്ടായതായി തോന്നുന്ന പാളിച്ചകൾ വിശദമാക്കാമോ?

1.
2.
3.

തീയതി :

പേര്.

സ്ഥലം :

ഒപ്പ്