



Government of Kerala

**A STUDY ON THE ROLE OF LOCAL BODY IN
CREATING INCOME GENERATING PROGRAMME
ENSURING ENVIRONMENTAL SUSTAINABILITY-A
CASE STUDY OF “COMPREHENSIVE ORGANIC
BASED RICE DEVELOPMENT PROJECT”
IMPLEMENTED BY ADAT PANCHAYAT IN
THRISSUR DISTRICT**

The Report

**STATE PLANNING BOARD
GOVERNMENT OF KERALA**

MARCH 2014

FOREWORD

Paddy cultivation was art of the pride culture of Kerala State. The State has a number of non certified organic farmers who produce rice, vegetables and fruits. Promotion of organic agriculture in Kerala could be done effectively after strengthening the organic input supply system and marketing network. The support for certification cost also to be provided. Isolated attempts were made for the last 5-6 years for promoting organic agriculture and major projects were not implemented through Government support. In this study an attempt has been made to assess impact of organic rice cultivation on the productivity, employment and the environment of the proposed area.

Survey results indicate that organic farmers adopt more environmental management practices. Findings lead some generally held view that farmland birds are among the main beneficiaries of organic farming. This is a blessing in disguise. During the process of conversion, more than half of the respondents reported that the switch over to organic production has resulted in financial improvement. The survey results demonstrate that organic farming is more labour- intensive and thus contributes to rural employment. In particular conversion has led to significant increase in labour and employed part- time labour. I hope that findings and suggestions will quite useful to the planners and policy makers

I appreciate Smt. Nithya T.V. Research Assistant, District Planning Office , Thrissur for preparing this report.

Thrissur
01/04/2013

Sd/-
T.S.Radhakrishnan
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DISCLAIMER

This working paper has been prepared by me- Smt. Nithya T.V, Research Assistant, District Planning Office, Thrissur. The facts and figures in the report are based on quick field survey done by me and do not reflect the views or policies of Kerala State Planning Board. The purpose of this document is to provide a comprehensive overview of the scheme/projects implemented by Local Self Government during XII Five Year Plan.

A C K N O W L E D G E M E N T

The greater thanks goes to none other than the Kerala State Planning Board for giving me such an opportunity to conduct a study . I am extremely grateful to Shri T.S. Radhakrishnanan , District Planning Officer Thrissur and also to my friends and colleagues for their timely guidance and support. I also thanks to the whole hearted co- operation extended by the faculties of Adat G.P., Krishibhavan and also to the office staff of the Chathan kole Karshaka Samajam. I express my sincere gratitude towards the respondents interviewed for the study. At last but the most , I dedicate this work on the feet of ‘God Almighty’whom i believe , the source of all righteousness and who leads me at each moment.

Sd/-

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ABSTRACT

Present study was conducted during 2013-14 in Thrissur district to analyze the impact of income generating programme ensuring environmental sustainability of the project beneficiaries of Comprehensive organic rice development project implemented by Adat Panchayath in Thrissur District . The data was collected from randomly selected 30 beneficiaries. Survey results indicates that organic farmers adopt more environmental management practices.

During the process of conversion, more than half of the respondents reported that the switch over to organic production has resulted in financial improvement The survey results demonstrate that organic farming is more labour- intensive and thus contributes to rural employment. In particular conversion has led to significant increase in labour and employed part- time labour. Around 66% of the farmers felt that the scheme had provided with the essential support during the conversion period. 44% of them found that the support from the scheme is useful but not enough. In general, respondents were satisfied with the administration of the scheme. By considering the alternative support to the ongoing scheme is training the farmers on the new techniques and strategies of organic farming and educating the farmers to increase the awareness of the markets of organic produce. Findings leads to some generally held view that farmland birds are among the main beneficiaries of organic farming. This is a blessing in disguise.

There is no specific problem mentioned in the implementation of the project as the payments to the farmers were made through the co-operative bank. Details show that total production of the area under Karshaka Samithy has shown increasing trend with the inherent motivation for producing organic rice which proves to be fruitful by its increasing production. One of the major objective of the study is to assess the yield productivity of High yielding varieties introduced in the study area. Considering the productivity of the seed supplied during the scheme it has been noticed that productivity per acre has increased compared to the earlier year constituting 10.96% positive variation.

CHAPTER I INTRODUCTION

Rice is a major cereal crop, grown across the country. It is also facing the same problems and challenges like any other crop. Over 90% is produced and consumed in the Asian continent. Nevertheless a large chunk of Asia's population's staple food is rice, its cultivation has been becoming less remunerative. In this context alternative farm techniques and strategies for growing rice ought to be found in the long run. Owing to the merits of organic cultivation as compared to modern practices, such principle has attracted across the world.

Organic agriculture has grown out of the conscious to create the best possible relationship between the earth and men. During the last two decades, there has been a significant sensitization of the global community towards the environmental preservation and assuring of food quality.

In today's terminology, it is a method of farming system which primarily aims at cultivating the land and raising crops in such a way as to keep the soil alive and in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (bio fertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly and pollution free environment.

The total organic agricultural area in Asia is nearly 3.3 Million Hectares. This constitutes 9% of the world's organic agricultural land. The leading countries by area are China (1.9 Million Hectare) and India (1 Million Hectares)

Table1.1
Total area and total number of farmers under organic Certification process, Kerala

Category	Organic	In-conversion	Total
Total area in Ha	735267	7516.67	14869.34
Total number of farmers	6215	8857	15072

Source: Department of Agriculture &Co-operation, Govt. of India

Benefits of organic farming

- Makes agriculture more regarding, sustainable and respectable.
- Sustain soil fertility by preventing the loss of soil and leaking minerals.
- Protects and enriches bio-diversity micro organism, soil flora and fauna, plants and animals.
- Requires less water and promote water conservation.
- Improves and maintains agro eco system and natural land scape for sustainable production.
- Depends mostly on renewable on farm resources.
- Encourages consumption of renewable energy resources, mechanical and other alternate sources of fuel.
- Includes domestic animals as an essential part of organic system which helps maintaining soil fertility and also increases the income of the farmer.
- Ensures pollution free air, water, soil, food and natural ecosystem.
- Improves agro-bio diversity.
- Protects and enhances traditional knowledge in farming processing and seed improvement leading to its protection for the future generations
- Reduces cost of production through locally suitable methods and inputs.
- Produces adequate quantity of nutritious items and best quality food and develops a healthy food culture.

Organic farming is a crop production method respecting the rules of the nature, targeted to produce nutritive, healthy and pollution free food. It maximizes the use of on -farm resources and minimizes the use of off – farm inputs. It is a farming system that seeks to avoid the use of chemical fertilizers and pesticides. Commitment to protect and preserve nature is a pre-requisite for practicing organic farming. In organic farming, the entire ecosystem (i.e. plant, animal, soil, water and micro-organisms) is to be protected. Organic cultivation improves structure and fertility of the soil through balanced choice of crops and implementation of diversified cropping system. Now, the consumers prefer natural / ethnic foods, particularly organic foods across the world and are ready to pay premium price for such foods and the demand for organic agriculture products is increasing day by day.

Environmental Soundness of Organic Farming

The environmental qualities of organic farming methods have been proven beyond any doubt. Long-term studies in the US and many other countries have shown that even a reversion to organic farming after years of modern high-input chemical farming has shown the resilience of nature to come back to a healthy state. Scores of researches have shown that organic farming has low negative impact on the environment. Not only has the natural resource base benefited but also the quality of the product has improved.

Economic viability of organic farming

To be economically viable, farmers should be able to produce enough for self-sufficiency and income by ensuring sufficient returns to meet the costs. The yield as well as resource conservation and minimal risks should be the measure of the sustainable farming.

KOLE PADDY FIELDS

Paddy cultivation is by far the largest agricultural practice pursued by a major section of the people. The low lying lands are cultivated with paddy and are fit only for this purpose. The major irrigation works in the district are the Peechi, Vazhani, Chalakudy and Cheerakuzhi projects. The ayacut of Peechi Project which is the largest consists of 46,000 acres of cultivable land.

The most important crop of the district is paddy. Next to paddy, tapioca forms the chief food crop. Kole land extends over an area of 400 Hectares partly along Thrissur.

Kole wetland is a unique wetland lying in Thrissur District. It gives 40% of the Kerala's rice requirement and acts as a natural drainage system for Thrissur city and Thrissur District. The kole wetland is one of the largest, highly productive and threatened wetlands in Kerala and has been declared in "Ramsar" convention for protection and it comes in central Asian Flyway of migratory birds.

The word Kole is a Malayalam word and means that a bumper yield. It is a particular cultivation method adopted in wetland in Thrissur district from December to May which otherwise is submerged from June to November, half of the year. The kole wetland cover an area of 13632 Hectares spread over Thrissur district & Malappuram district.

Puzhakkal river one of the rivers which go through the kole wetland and provide water for rice cultivation. In terms of the number of birds, the Thrissur kole wetland is the third largest in India.

Documents says rice cultivation in Thrissur kole wetland has been started as early as 18th century. They used to reclaim kayal land and erect temporary earthen bunds. Kole lands give 4 to 5 tones of rice per Hectare.

The main threat to kole wetland is expansion of cities and towns. The recent boom in construction industry in central kerala has rang the alarm bell for the kole wetland. Coconut cultivation, construction of buildings & houses, conversion of fields for sand and clay mining and brick kilns, hunting of wetland birds etc, are the other main threats for the kole wetland.

Demand for Environmentally Preferable Products (EPP) appears to be promising. Higher consumer concerns in the area of food safety and quality and about the environmental effects of agriculture have generated greater demand for organic food especially in developed countries. In this context linking such activities with the income generating programmes of local bodies widens the scope of marketability and increased income for the beneficiaries ensuring environmental sustainability. Innumerable efforts are undertaken by various organisations and government as well to meet the rising demand for organic as well as quality products. A successful intervention has been done in this area by Adat Panchayat adopting a project, “COMPREHENSIVE ORGANIC BASED RICE DEVELOPMENT PROJECT”, in their annual plan of 2012-13.

PROJECT PROFILE

Adat is a beautiful Panchayat located in Puzhakkal Block in Thrissur District in Kerala. Under decentralisation of Local bodies, this Panchayat was also given autonomous powers under the Panchayati Raj Act. Adat G.P. has become a model village showcasing various honors- “Swaraj Award” for best Panchayat for eight years, the Central government's “Nirmal Gram Puraskar” for achieving full sanitation and the “Central Water Resources Ministry's prize” for groundwater augmentation through rainwater harvesting. The panchayat has both organic Adat rice and Kerasree coconut oil, and they sell more despite the high prices. That farming is not a loss-making activity here for the last 10 years. Besides it becoming self-reliant, Adat's initiative to have its own branded organic rice solves many chronic problems faced by paddy cultivators.

The project “**Comprehensive Organic Based Rice Development Project**” is a one year project emphasising on organic methods of cultivation. The Agricultural Officer is designated as the implementing Officer of the above project. It is in association with the Centrally sponsored scheme “Rasthriya Krishi Vikas Yojana” (RKVY). The main objective of the project is to provide High yield variety of Paddy seeds to 950 Hectares of Kole land comprising of 13 Kole Padavukal and 1578 farmers. The Panchayat has procured 76 tons of seeds from Kerala Seed Development Authority, Kerala

Agricultural University & National Seeds Corporation. The procured seeds are supplied to 950 Hectares of Kole land and they are expecting a yield of 7600 ton of paddy which will be purely organic in nature.

Table-1.2

The funding Pattern for the above project

<i>Sl.No.</i>	<i>Source of fund</i>	<i>Amount(₹)</i>	<i>Percentage</i>
1	Plan fund	937142	3.99
2	Centrally Sponsored	1800000	7.66
3	Beneficiary Contribution	20750000	88.35
	<i>Total project cost</i>	23487142	100

Beneficiary selection:

The beneficiaries for the above project are selected on the following criteria:

1. The Farmers who are cultivating the kole lands of Adat Grama Panchayat.
2. The Farmers who are cultivating the kole lands on Mundakan basis in 2012-13.
3. From the Padavukals who purchase seeds from Government, Semi-government and Accredited agencies.

The above review has shown that demand for Environmentally Preferable Products (EPP) appears to be promising. In particular heightened consumer concerns in the area of food safety and quality and about the environmental effects of agriculture have generated greater demand for organic food especially in developed countries. In this context linking such activities with the income generating programmes of local bodies widens the scope of marketability and

increased income for the beneficiaries ensuring environmental sustainability. Innumerable efforts are undertaken by various organisations and government as well to meet the rising demand for organic as well as quality products. A successful intervention has been done in this area by Adat Panchayat adopting a project, “COMPREHENSIVE ORGANIC BASED RICE DEVELOPMENT PROJECT”, in their annual plan of 2012-13. So, considering the significance of organic cultivation, an attempt has been made in the present study to know the impact of income generating activities on sustainable rural livelihoods of project beneficiaries. The present study addressed towards identifying such factors that influence the success as well as the failure of the project. Above all, the problems and suggestions expressed by the respondents in sustaining the organic agriculture be of immense use to the policy makers, extension workers, NGOs and developmental agencies to redesign their programmes for effective utilization by beneficiaries for their development.

Objectives of the Study:

Based on the above broad objective, specific objectives are framed for the study

1. To analyse the yield productivity of organic seeds.
2. To study the demand-price relationship of organic rice.
3. To suggest more viable organic farming methods and support systems.
4. To study the problems faced by the local body in implementing the above project.

Data source and Methodology:

The study fundamentally rests to the assumption that all the factors related to the farming are economically measurable. Both primary and the secondary data are used for conducting the study. There are 13 karshaka padavukal in Adat G.P. in which “Chathankole Poopilakadavu Karshaka samajam” is one of the leading and has accepted organic cultivation methods by 2003 onwards. Primary data is collected from 30 farmers by using structured questionnaire.

Secondary data was collected from the reports of Economics and Statistics department, Agriculture department, Panchayat records and other reports published both by central and state Governments. Data collected was analysed using statistical techniques like Averages, Percentages, Trend Lines etc .

Scope of the study

The present study addressed towards identifying such factors that influence the success as well as the failure of the project. Above all, the problems and suggestions expressed by the respondents in sustaining the organic agriculture will be of immense use to the policy makers, extension workers, NGOs and developmental agencies to redesign their programmes for effective utilization by beneficiaries for their development.

Limitations of the study

Limited time period is the obvious limitation of the study. As the number of respondents selected were small generalization of findings are based on the sample study.

Chapter Organisation

The study is presented in three chapters. Chapter first presents the organic rice development scheme and objectives and methodology of the study. Chapter second gives available literature closely concentrated to the study. The chapter three gives a profile of the study area and analysis. Last chapter gives the findings and suggestions of the study.

CHAPTER II

REVIEW OF LITERATURE

In this section we are analysing the existing literature on organic cultivation especially paddy cultivation.

Studies at International / National/ State Level

1 'Analysis of Demand and supply of Rice in Indonesia' Dept of Agriculture Economics North Dakota State University Agriculture Economic Report July 1985 (Won W Koo Maman H Karmana & Gordan W Erlandson) In this study it has been reported that sustainability of rice among other food crops is determined by price as well as tastes and preferences.

2. An economic analysis of modern rice production technology and its adoption behaviour in Tamil Nadu - 'K Sita Devi & T. Ponnarasi Agricultural Economics Research Review Vol 22. In this study it has been reported that farmers have been vastly benefited by System of Rice Intensification Method. It has helped to increase the rice production without increasing the area under its cultivation as an alternative method for rice cultivation.

3. Enviournment and economic dimensions of organic rice cultivation in south India S Rajendran paper presented at the 1st RDA/ARNOA International Conference on Asian Organic Agriculture November 2002- It explains that organic rice cultivation is associated more towards farm oriented self sustained system. Major issues like standardization of necessary inputs like vermicompost and bio fertilizers need to be addressed by keeping enviournment and economic dimensions of agriculture sustainability in the long run.

4 'Problems and prospects of paddy cultivation in Kuttanad region - A Case study of Ramankari village in Kuttanad Thaluk-January 2002' (Thomas P M) has made an attempt to explore the problems and prospects of paddy cultivation in Kuttanad Region. The major thrust of the study is the revival and development of paddy farm sector in Kuttanad region.

5. 'Overview of farming practices in the water logged areas of Kuttanad Region JI.2010' (Jayan P.R. and Nithya Sathyan)have made an overview of farming practices in the water logged areas of Kerala, India. It has been stated that the potentiality of these areas should be exploited and necessary measures to be under taken.

6. 'Future in the past: A study on the status of organic farming in Kerala' Discussion Paper No. 82 Kerala Research Programme on Local Level Development Centre for Development Studies Thiruvananthapuram (Balachandran. V). In this study, he look at the organic farming scenario in Kerala and analyze a few case studies drawn from different parts, which are examples of different organic farming approaches adopted by the farmers. These examples could serve as role models for those who plan to switch over to eco-friendly agricultural practices.

7. 'Economics of paddy cultivation in Palakkad District Kerala' Dr. R Ravikumar & Sudheesh B(EPRA International Journal of Economic and Business Review) This paper emphasis the group management for improving the economies of paddy cultivation through better management based on low cost technology, improvement in productivity selective mechanization and cost reduction. This statement has been proved in the present study.

8. 'Status Paper on Rice in Kerala' (S. Leena Kumari). In the study report it has been put forward that among the strategies for increasing rice production in the State, area expansion needs immediate attention since Kerala cannot afford to any more conversion of paddy lands, ecologically or economically. The Kerala Conservation of Paddy Land and Wetland Act, 2008 has to be implemented in its true sense to arrest further conversion of paddy lands and to protect the existing paddy lands. Among the rice production technologies, development of suitable machines for the different ecosystems of Kerala is of prime importance considering the shrinking labour force of the state.

9. ' The Adhoc package of practices recommendations for organic farming -Dr.D. Alexander, Dr.S. Rajan, Dr.L. Rajamony Dr.K.Ushakumari ,Dr. Sajan Kurien, Directorate of Research Kerala Agricultural University Thrissur . This study aims at providing necessary guidelines to the practitioners and potential followers of

organic farming. The study also analyses the global interest in natural health foods, availability of vast pool of traditional knowledge, lack of incentives for production of organic inputs, poor local infrastructure facilities for processing and value addition, lack of satisfactory income, absence of regulation on supply system, non-remunerative and fluctuating prices of organic produce etc.

References

- 1 Won W Koo Maman H Karmana & Gordan W Erlandson - 'Analysis of Demand and supply of Rice in Indonesia' Dept of Agriculture Economics North Dakota State University Agriculture Economic Report July 1985
2. K Sita Devi & T.Ponnarasi ' An economic analysis of modern rice production technology and its adoption behaviour in Thamil Nadu ' - Agricultural Economics Research Review Vol 22.
3. S Rajendran 'Environment and economic dimensions of organic rice cultivation in south India paper presented at the 1st RDA/ARNOA International Conference on Asian Organic Agriculture November 2002-
4. Thomas P M ' Problems and prospects of paddy cultivation in Kuttanad region -A Case study of Ramankari village in Kuttanad Thaluk-January 2002'
5. Jayan P.R. and Nithya Sathyan 'Overview of farming practices in the water logged areas of Kuttanad Region Jl.2010'
6. Balachandran. V Future in the past: 'A study on the status of organic farming in Kerala' Discussion Paper No. 82 Kerala Research Programme on Local Level Development Centre for Development StudiesThiruvananthapuram
7. Dr. R Ravikumar & Sudheesh B 'Economics of paddy cultivation in Palakkad District Kerala' (EPRA International Journal of Economic and Business Review)
8. S. Leena Kumari 'Status Paper on Rice in Kerala'
9. Dr.S. Rajan, Dr.L. Rajamony Dr.K.Ushakumari ,Dr. Sajan Kurien Dr.D. Alexander, 'The Adhoc package of practices recommendations for organic farming -Directorate of Research Kerala Agricultural University Thrissur

CHAPTER III

ANALYSIS OF PADDY CULTIVATION

India accounts for only about 2.4 % of the world's geographical area and 4 % of its water resources, but has to support about 17 % of the world's human population and 15 % of the live stock. Agriculture is an important sector of the Indian economy, accounting for 14% of the nation's GDP, about 11% of its exports, about half of the population still relies on agriculture as its principal source of income and it is a source of raw material for a large number of industries. Accelerating the growth of agriculture production is therefore necessary not only to achieve a over all GDP target of 8 per cent during the 12thPlan and meet the rising demand for food, but also to increase incomes of those dependent on agriculture to ensure inclusiveness.

Rice is one of the most important food crops of India in term of both area, production and consumer preference. India is the second largest producer and consumer of rice in the world. Rice production in India crossed the mark of 100 Million Metric Tonnes in 2011-12 accounting for 22.81% of global production in that year. The productivity of rice has increased from 1984 kg per hectare in 2004-05 to 2372 kg per Hectare in 2011-12.

Paddy in Kerala

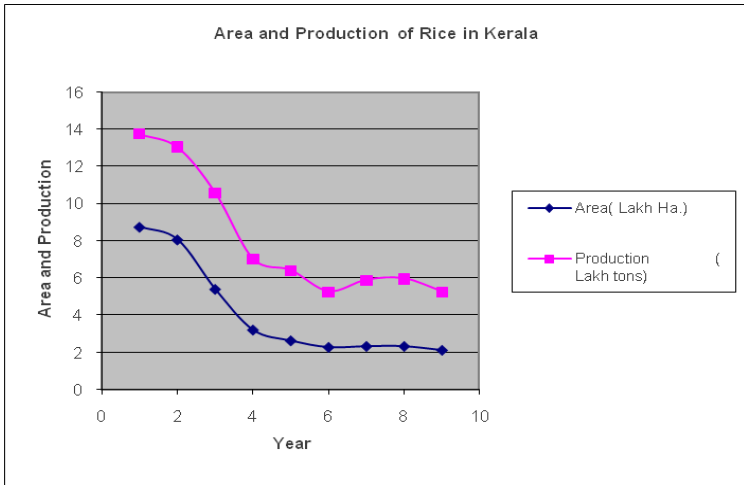
Paddy is the staple food of the people of Kerala, and traditionally the cultivation of rice has occupied pride of place in the agrarian economy of the state. The lush green of paddy fields is one of the most captivating features of Kerala's landscape. The area under paddy cultivation increased substantially during the first fifteen years after the states formation- from 7, 60,000 Ha to 8, 80,000 Ha in 1970 -71. There was however a steady decline in the area under cultivation from 1980s onwards. Paddy is cultivated in three seasons in all the districts of Kerala except Wayanad district. In Wayanad there is no autumn paddy cultivation. The area under paddy cultivation in the state is decreasing regularly. Area of paddy is collected in three seasons and its area is estimated even in panchayat level. Upland cultivation of paddy is the new change in Kerala

Table-3.1
Area , Production and Productivity of Rice in Kerala
(1971-2011)

Year	Area(Lakh Ha.)	Production (Lakh Tons)	Productivity (Kg/Ha)
1971-72	8.75	13.76	1544
1981-82	8.07	13.06	1660
1991-92	5.41	10.6	1959
2001-02	3.22	7.04	2182
2006-07	2.64	6.42	2435
2007-08	2.29	5.28	2308
2008-09	2.34	5.9	2520
2009-10	2.34	5.98	2557
2010-11	2.13	5.28	2452
2011-12	2.81	5.69	2519

Source - Directorate of Economics and Statistics, Kerala.

Figure-3.1
Area and Production of Rice in Kerala



The total paddy area in Kerala during the year 1961 - 62, was 7.53 lakh hectares and in 1975-'76 it was 8.76 lakh hectares. Thereafter a steady decrease in paddy cultivation has been noticed and reached to 2.29 lakhs hectares during the agricultural year 2007-08. But in 2008-09, area of paddy cultivation was increased as 2.34 lakhs hectares and then slightly decreased during the year 2009 -10. On comparing with the year 1975-76, area of paddy cultivation has decreased by 76% during the year 2010-11.

A reversal of this long term decline in paddy cultivation in Kerala is necessary for at least two reasons , as the Government of Kerala's Economic review 2010 notes that food grains produced in the State account only 15 % of its total consumption. Kerala imports food grains from Tamil Nadu, Andra Pradesh, Madhya Pradesh Bihar and Gujarat to fully meet its consumption needs.

Secondly paddy fields are a vital part of Kerala's environment and ecological systems. They provide natural drainage paths for flood waters, conserve ground water and are crucial for the

preservation of a rich variety of flora and fauna. In several parts paddy cultivation is carried out in a manner that enriches the specific geographical and ecological features of these regions.

Thrissur

Paddy cultivation is by far the largest agricultural practice pursued by a major section of the people. The low lying lands are cultivated with paddy and are fit only for this purpose. The major irrigation works in the district are the Peechi, Vazhani, Chalakudy and Cheerakuzhi projects. The ayacut of Peechi Project which is the largest consists of 46,000 acres of cultivable land.

The most important crop of the district is paddy. Next to paddy, tapioca forms the chief food crop. Kole lands extend over an area of 400 hectares partly along Thrissur.

Table-3.2								
Area and production under Paddy cultivation in Thrissur District (In Ha)								
Year	Autumn		Winter		Summer		Total	
	Area	Production	Area	Production	Area	Production	Area	Production
2010-11	3033	6012	10864	26843	6362	20224	20259	53079
2011-12	2740	5819	10727	28523	7705	27974	21172	62316
20112-13(Estimated)	2577	5601	13045	35612	7476	26342	23098	62515

Source- Agriculture Census , Kerala

Figure 3.2
Area under Paddy cultivation in Thrissur District

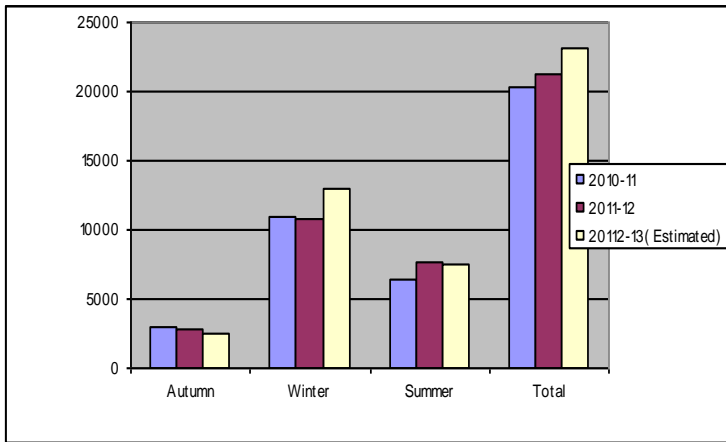
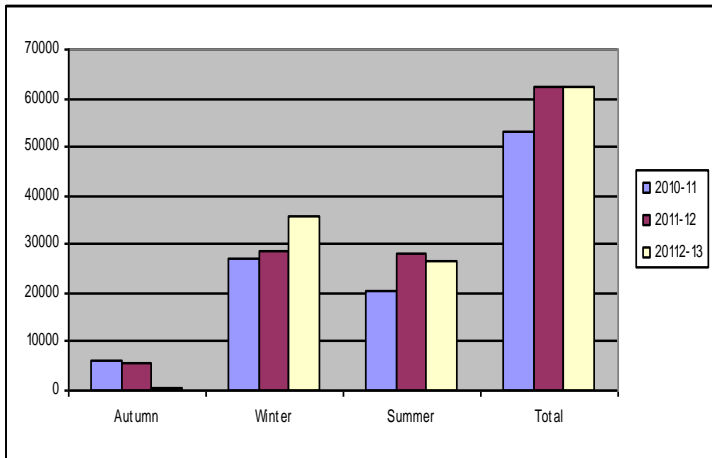


Figure3. 3
Production under Paddy cultivation in Thrissur District



Overall performance of the Thrissur district in terms of area and production of paddy cultivation shows an increasing trend. During the year 2011-12 Paddy area has increased in Thrissur District by 22.9 %.

Paddy cultivation in Puzhakkal Block

Puzhakkal river, one of the rivers which go through the kole wetland and provide water for rice cultivation. In terms of the number of birds, the Thrissur kole wetland is the third largest in India.

Table-3.3
Area under Paddy cultivation in Puzhakkal Block (Area in Ha)

Year	Area under paddy	Production of rice	Area under paddy	Production of rice	Area under paddy	Production of rice	Total	
	Autumn		Winter		Summer		Area under paddy	Production of rice
2010-11	110.81	209.49	1066.43	3294.06	1619.27	4889.5	2796.51	8393.05
2011-12	147.83	302.44	749.87	2146.51	2365.83	8405.92	3263.53	10854.87

Source-Agriculture Statistics, Kerala

Coming to the case of the Puzhakkal Block, area under cultivation has increased by 16.7 % and production to 22.7 % compared to the previous year.

Figure 3.4

Area and production under Paddy cultivation in Puzhakkal Block

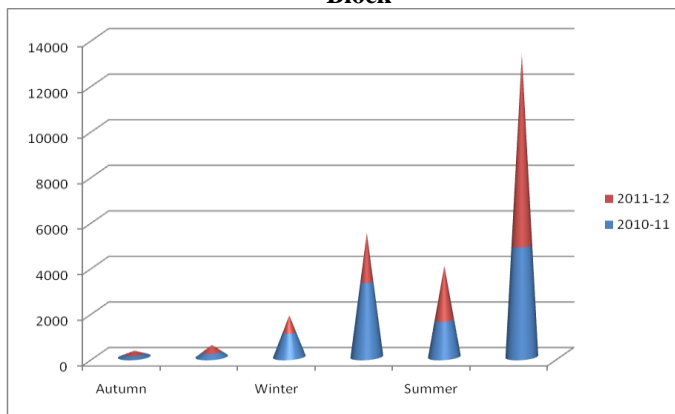


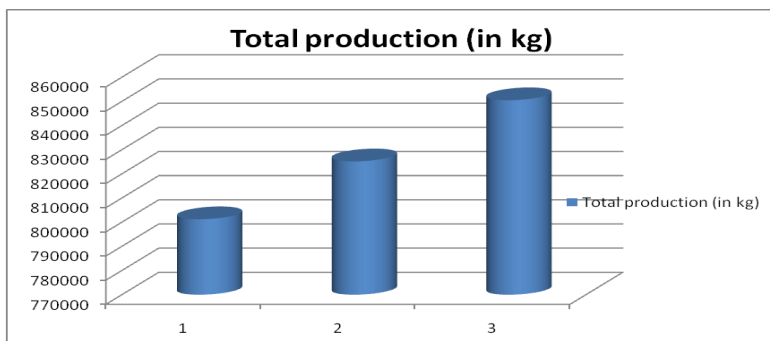
Table-3.4

Details of paddy cultivation in Chathankole Karshaka Samajam

Year	Total production (in kg)	Procurement price of paddy (in Rupees)
2010-11	8,01,236	12
2011-12	8,25,173	15
2012-13	8 50,500	17

Source: Records of the Karshaka Samajam

Figure-3.5
Details of paddy cultivation in Chathancole Karshaka Samajam



Adat is a beautiful Panchayat located in Puzhakkal Block in Thrissur District in Kerala. Under decentralisation of Local bodies, this Panchayat was also given autonomous powers under the Panchayati Raj Act. Adat G.P. has become a model village showcasing various honors- Swaraj Award for best Panchayat for eight years, the Central government's "Nirmal Gram Puraskar" for achieving full sanitation and the "Central Water Resources Ministry's prize" for groundwater augmentation through rainwater harvesting. The Panchayat has both: organic Adat rice and Kerasree coconut oil, and they sell well despite the high prices. Farming is not a loss-making activity here for the last 10 years. Besides being self-reliant, Adat's initiative to have its own branded organic rice solves many chronic problems faced by paddy cultivators.

Other details are given as follows

Area	:	22.03 Sq. k.m
Wards	:	18
Population	:	23441
Area of Paddy land	:	1200.62 Ha
Area of Kole Land	:	1101.62 Ha
Other paddy lands	:	99 Ha
Season of cultivation- Puncha	:	1101.62 Ha.

Details of farmers

Number of Kole Padavukal	:	13
Number of Paddy farmers	:	3638
Total number of farmers	:	4384
Nominal farmers	:	3484
Small scale farmers	:	300
SC Farmers	:	1250
Agriculture family	:	3638

Kerala has built a strong set of democratic institutions at the local level , and they have been a pillar of support for rice farmers in the sate. During the late 1980s the State Government initiated a programme of group farming to paddy cultivation. Padasekhara Samithis or collectives of paddy farmers represent an institution that began as a part of this group farming efforts. In Adat Panchayath total area under paddy cultivation is about 1200.62 ha of land and there are 13 Padeshekara samithis

Details shows that total production of the area under Karshaka samithy has shown increasing trend with the inherent motivation for producing organic rice which proves to be fruitful by its increasing production.

One of the major objectives of the study is to assess the yield productivity of High yielding varieties introduced in the study area.

Table-3.5
Productivity of HYV seeds used in the study area

Year	Name of the variety	Duration type	Kg. used	Production kg/Acre	% variation
2011-12	Jyothi	Early duration	45 kg	2875	10.96 %
2012-13	Uma	Medium duration	40 kg	3190	

Source-Reports, Thaluk Statistical Office, Thrissur

Considering the productivity of the seed supplied during the scheme it has been noticed that productivity per acre has increased compared to the earlier year constituting 10.96% positive variation.

Table-3.6
Level of fertilizer and pesticide application in the study area

Type of fertilizer used	Quantity (per acre) in kg	
	2011-12	2012-13
Bio fertilizers		
Vermicompost	250	150
Neem cake	100	100
Ground nut cake	0	50
Organic micro food	0	8
Bone mixture	0	50
Chemical fertilizers		
Urea	15	25
Potash	15	30
Factomphose	0	50
pesticides		
Tryco cards	5cc	5cc

Source-Reports, Thaluk Statistical Office, Thrissur

Organic nature of any cultivation can be assessed by the level of fertilizer used both chemical and organic fertilizers and pesticides. In the case of the sample area, increase in the combination of the bio-fertilizers is being noticed also chemical pesticides have placed by bio pesticides and insecticides.

Adat Rice a new venture

Once the paddy was harvested, the Panchayath found that there was indeed premium value for its organic rice. The Panchayath commandeered kudumbasree units to process the paddy and began marketing under the brand name Adat.

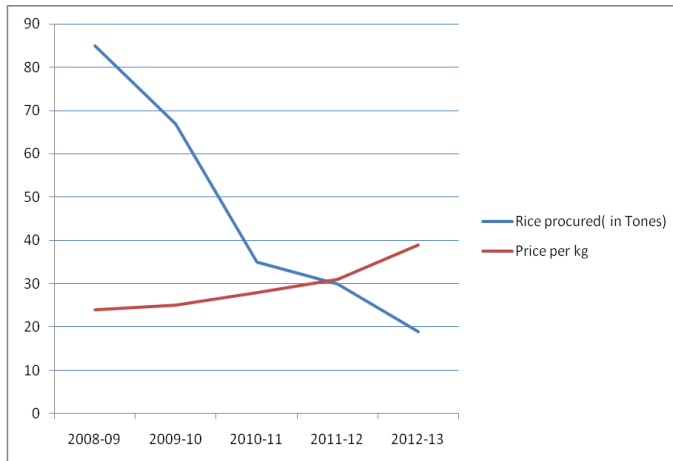


Table- 3.7
Details of Adat Rice

Year	Rice procured(in Tones)	Price per kg
2008-09	85	24
2009-10	67	25
2010-11	35	28
2011-12	30	31
2012-13	19	39

Source- Records Adat rice

Figure 3.6
Price analysis of Adat Rice



The quest for profitable marketing outlets has given rise to the formation of Adat rice which is organic in nature with 4 outlets

around in Thrissur city. New initiative for the marketing for the organic rice shows that the total volume of rice procured each year by the society shows a decreasing trend which may be due to the lack of proper advertisement and may be due to the lack of knowledge of health benefits of the organic produce to the people.

Table 3.8

Socio economic characteristics of the sample house holds

Category	Sub Category	Number of farmers
Age	Below 50	8
	50 and above	22
Educational level	Below 10th	18
	above 10th	12
Ownership of land	Own	26
	Lease	4
Area under cultivation	0 to 0.5 Acres	9
	0.5 to 2 Acre	18
	2 Acre and above	3
Experience in farming	up to 10 years	2
	10 to 30 years	16
	30 years and above	12
Occupation	Agriculture and allied activities	25
	Business	1
	professional	4

CHAPTER IV

FINDINGS

- During the year 2011-12 Paddy area has increased in Thrissur District by 22.9 % .
- Coming to the case of Puzhakkal Block, area under paddy cultivation has increased by 16.7 % and production to 22.7 % compared to the previous year.
- In the case of Adat grama Panchayath, Production has increased in 2012-13 year by 10.6 % compared to 2011-12.
- Altogether about 50% of the farmers in Adat rama panchayat rely on organic farming as their major source of livelihood.
- The majority of organic farmers ie 90 % are small & marginal farmers possessing up to 2 acres. In spite of the small size of the land holding , the farmers have adopted organic farming methods.
- Considering the productivity of the seed supplied during the scheme it has been noticed that productivity per Acre has increased compared to the earlier year constituting 10.96% positive variation.
- Organic nature of any cultivation can be asessed by the level of fertilizer used, both chemical and organic fertilizers and pesticides. In the case of the sample area, increase in the combination of the bio-fertilizers is being noticed also chemical pesticides have placed by bio pesticides and insecticides.
- Next the new initiative for the marketing for the organic rice shows that the total volume of rice procured each year by the society shows a

decreasing trend which may be due to the lack of proper advertisement and may be due to the lack of knowledge of health benefits of the organic produce to the people.

- Considering the productivity of the seed supplied during the scheme it has been noticed that productivity per acre has increased compared to the earlier year constituting 10.96% positive variation.
- Organic nature of any cultivation can be assessed by the level of fertilizer used both chemical and organic fertilizers and pesticides. In the case of the sample area, increase in the combination of the bio-fertilizers is being noticed and chemical pesticides have been replaced by bio pesticides and insecticides.
- Earlier studies have shown that it requires minimum of 3-5 years for the soil to respond to a changeover to organic farming methods, the results are indicative of the transitional stage of organic cultivation.

Survey results indicates that organic farmers adopt more environmental management practices During the process of conversion, more than half of the respondents reported that the switch to organic production has resulted in financial improvement

- The survey results demonstrate that organic farming is more labour- intensive and thus contributes to rural employment. In particular conversion has led to significant increase in employed part- time labour.
- Around 66% of the farmers felt that the scheme had provided with the essential support during the conversion period. 44% of the found that the support from the scheme is useful but not enough. In general, respondents were satisfied

- with the administration of the scheme.
- An alternative support to the ongoing scheme is training to the farmers on the new techniques and strategies of organic farming and educating the farmers to increase the awareness of the markets of organic produce.
 - There is no any specific problem mentioned in favour of the implementation of the project as the payment to the farmers were made through the co-operative bank.
 - Findings led some generally held view that farmland birds are among the main beneficiaries of organic farming. Which is a blessing in disguise.

Policy Recommendations

- Scientific validation of organic agriculture
- Participatory research with farmers
- Establish knowledge development centres
- Develop and support model organic farms
- Support localised net work
- Use media for enhancing awareness among farmers intervention agencies and consumers
- Consumer awareness on the high quality of organic rice
- Eco labelling for organic produce
- Competitive pricing
- Developing strategic urban marketing
- Providing single window subsidy, minimum insurance coverage, initiatives for varieties like Njavara which has Ayurvedic value, District level procurement centres and exploration of channels for value addition etc has also to be made.

APPENDIX

INTERVIEW SCHEDULE

Respondent No:

1. **Farmer's age** years
2. **Gender**
Female Male
3. **Level of education:**
4. **In what year did you start to convert to organic farming?**
..... (year)
5. **How many years had you been a farmer when you decided to go organic?** years
6. **Which method of conversion do/did you use?**
Whole-farm conversion Part-farm conversion
7. **Are you a member of any environmental or countryside Organisation (s)**
8. **Total farm size (Hectares)**
9. **Please indicate the average yield from your farm before conversion and now.**
Crop Yield prior to conversion Yield now
10. **Please indicate how many people (including yourself) worked on your farm before Conversion and now**
Prior to conversion Now

11. Has conversion to organic farming resulted in any small-scale Marketing or food processing initiatives on your farm?

yes

no

12. How has conversion to organic farming affected the financial situation of your business?

Large improvement

Small improvement

No change

Deterioration

13. Do you expect or have you observed any environmental benefits on your farm as a result of conversion to organic methods?

General increase in bird life
bird species

More

Increase in flower/plant varieties
colour in the landscape

More

General increase in animal life
insects

More

Less water pollution
(please specify)

Other

.....

14. Which factors do you consider to be the MOST important in influencing your decision to convert?

15. Which are your main marketing channels?

16. Have you found yourself having to sell any of your organic products as conventional products due to lack of appropriate marketing opportunities?

17. In your opinion what is the single most important thing that could be done to improve the flow of information and advice to organic farmers?

.....
.....
.....
.....

18. How useful do you find the Organic Farming Scheme?

Essential support during insecure conversion period

Has given me a positive attitude towards organic farming

Useful but not enough

Other (please specify)

.....
...

19. Are you seriously considering converting back to conventional farming?

yes no