ANALYSIS OF DEVELOPMENT PROGRAMMES FOR PADDY PROMOTION UNDER DECENTRALIZED PLANNING IN THRISSUR DISTRICT

By

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(2015-11-057)

THESIS

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DECLARATION

I, Salpriya Seby (2015-11-057) hereby declare that the thesis entitled **"Analysis of development programmes for paddy promotion under decentralized planning in Thrissur District"** is a bonafide record of research done by me during the course of research and that it has not previously formed the basis for the award to me of any degree, diploma, fellowship or other similar title, of any other University or Society.

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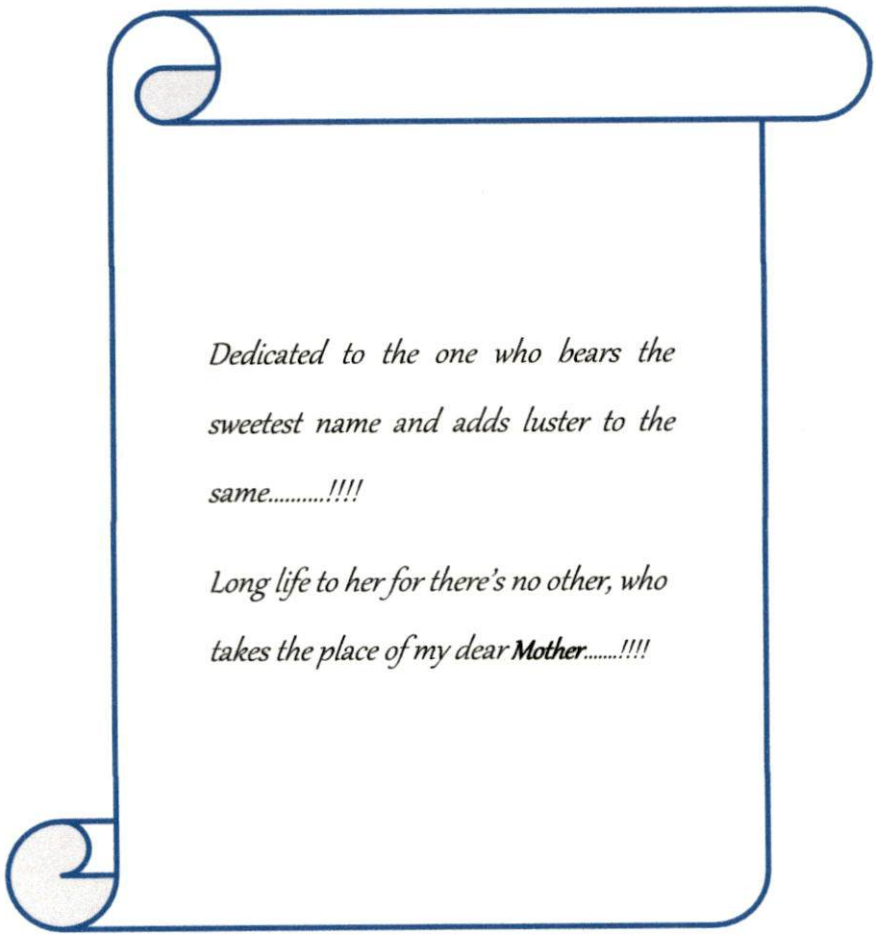

Dedicated to the one who bears the sweetest name and adds luster to the same.....!!!!
Long life to her for there's no other, who takes the place of my dear **Mother**.....!!!!

CONTENTS

LIST OF TABLES

LIST OF FIGURES

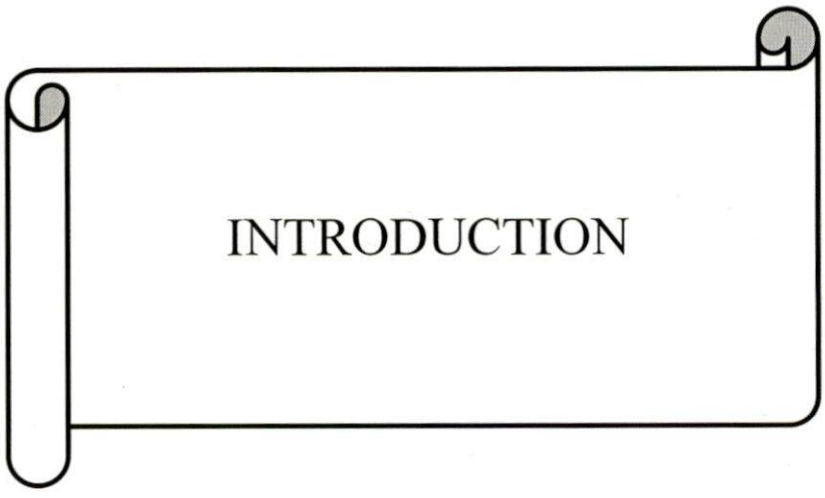
LIST OF APPENDICES

LIST OF ABBREVIATIONS

%	Percentage
AA	Agricultural Assistant
ADA	Assistant Director of Agriculture
ATMA	Agricultural Technology Management Agency
BAU	Birsa Agricultural University
CI	Constraint index
DES	Directorate of Economics and Statistics
et al	And others
FFS	Farmer Field School
FI	Factor index
Fig.	Figure
GALASA	Group Approach for Locally Adapted and Sustainable Agriculture
GOI	Government of India
GOK	Government of Kerala
ha	Hectare
i.e.	That is
IADP	Intensive Agricultural District Programme
IAMWARM	Irrigated Agriculture Modernization and Water bodies Restoration and Management
IF_i	Individual Factor Index

IPM	Integrated pest management
IPRD	Integrated Programme for Rice Development
IRDP	Integrated rural development programme
KAU	Kerala Agricultural University
KB	Krishibhavan
LEADS	Lead farmer centred extension advisory and delivery service
MoU	Memorandum of Understanding
MTA	Monthly Technology Advice
n	Sample size
NGOs	Non-governmental organization
No	Number
NREP	National rural employment programme
PAO	Principal Agriculture Office
PI	Perception index
PPC	Plant protection chemical
PPPSRI	Panchayat Level Perspective Programme for Sustainable Rice Development Initiative
R I	Relevancy Index
RKVY	Rashtriya Krishi Vikas Yojana
SD	Standard deviation
SDR	Sustainable Development of Rice
Sl.	Serial

SPB	State Planning Board
SREP	Strategic Research and Extension Plan
t	Tonne
T & V	Training and visit


INTRODUCTION

CHAPTER I

INTRODUCTION

"Everything else can wait, but not agriculture"

- Pandit Jawaharlal Nehru

India being an agrarian country, assigns high priority to foster farming activities. Rice is the staple food and southern states namely Andhra Pradesh, Tamil Nadu and Kerala together account for nearly one fifth of the paddy area in the country. Rice accounts for nearly 95 percent of the total amount of food grains produced within the state, therefore it turns out to be of our prime concern. There have been several projection of demand of rice made based on per capita consumption and projected population.

Paddy cultivation in Kerala has witnessed a steady decline since the 1980s. The sharp fall in the area under rice cultivation as well as in the quantity of rice produced in the State has important implications for Kerala's economic, ecological and social development.

The reduction in rice production will lead to food insecurity, price hike and related socio-economic problems. Over the last few years, however, there have been some signs of revival in rice production in Kerala.

Apart from food security, 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 regions of Kerala, paddy cultivation is carried out in a manner that enriches the specific geographical and ecological features of these regions (Thomas, 2011).

Since independence, the Government has been formulating policies, programmes, projects and schemes and investing significant financial resources through every five-year plan to accelerate rural and agricultural development. The state government had initiated and implemented several intensive and extensive measures to increase domestic rice production. Agricultural development programmes like the Intensive Agricultural District Programme (IADP) of 1960-61, the Operational Research Project in Integrated Rice Pest Control implemented from 1975 to 1995, the Group Farming Programme of 1989-90 and the Integrated Programme for Rice Development (IPRD) of 1994-95 were designed exclusively for the development of the State's paddy farm sector. Large number of research institutions and soil testing laboratories were also set up in the major rice producing areas of the State (Thomas, 2002).

The agricultural development programmes are aimed at increasing food supply to feed the rapidly expanding population. The major challenge faced by the Government is to increase the agricultural production with limited natural resources in a sustainable manner for ensuring food security and providing income security to the farmers.

The local resources, climate and agro-ecological features contribute to the success or failure of any intervention. Hence, decentralized planning for development of agriculture and allied sector is important. Local level planning therefore assists to arrive at an integrated, participatory and coordinated initiative for development of a sub-state geographical area. Decentralized planning is an approach to balanced development and reduction of regional disparities.

With the passage of the 73rd and 74th amendments to the constitution of India in 1992 and consequent to the enactment of Kerala Panchayat Raj Act in the year 1994 the state carried out pioneering reforms and embarked a path of comprehensive decentralization. Kerala with appreciative development indicators compared to

developed countries has been experimenting with decentralization and participatory local democracy, ultimately aimed at realization of the constitutional goal of establishing genuine "institutions of local self-government". The act laid the provision of a three tier system of panchayat for the first time *viz;* Gram panchayat, block panchayat and district panchayat in the rural areas and one tier system of urban local-government such as municipality in the less urbanized areas or Municipal Corporation in the more urbanized areas. Local self-governments were vested with the powers and responsibilities of economic development and social justice in their respective areas.

The distinctiveness of Kerala's decentralization is that, it has formularized a participatory framework with inbuilt social accountability measures to take in citizen's involvement in local planning and governance in harmony with the national and regional policies.

The eleventh five-year plan gave much focus on rice farming as over the years, paddy land has shrunk to almost one- third of the original. The challenge has been the major issue of planning at the grass roots level. Formulating the strategy of integrated paddy development which in turn require planning and implementation of projects at grassroots level, are the responsibilities vested with panchayats, which also includes coordinating various groups – farmers ,agricultural labourers, extension functionaries, social activists and people's representatives.

With an objective to meet the growing demand for rice through increasing the rice production, the Government has been implementing various programmes. Integrated agricultural development programmes are being implemented continuously in different panchayats in Thrissur district for the last many years mainly focusing on the development of different crops including paddy. Reports reveal that Thrissur district shows an increase in the area, production and productivity for the past few years, which clearly shows that there is some positive effect of

implemented paddy development programmes (DES, 2013; 2016) But it is important that these programmes should be successful to the fullest in terms of achieving goals since, huge amount of money is spent on the same. Keeping these issues in view, the study has been framed.

1.1 OBJECTIVES OF THE STUDY

- ✓ To analyse the trend of paddy promotion programmes implemented through Krishibhavans
- ✓ To delineate the components of the programmes
- ✓ To identify the factors influencing the implementation
- ✓ To study the perception of beneficiary farmers and extension personnel on the effectiveness of programmes under decentralized planning
- ✓ To suggest modifications to improve the effectiveness of paddy promotion programmes

1.2 SCOPE AND IMPORTANCE OF THE STUDY

The present study was taken up to analyse the paddy promotion programmes implemented through Krishibhavans. The future of agriculture depends mainly on the effective implementation of the development programmes. Therefore the perception of the beneficiary farmers as well as extension personnel were studied on the effectiveness of paddy promotion programmes implemented under decentralized planning. The study also intends to identify the factors influencing implementation of the programmes and the constraints felt by the beneficiaries and extension personnel while implementing the programmes. The results will be useful for

researchers, extension workers and policy makers as it analyses different dimension based on perception. The results of the study will help to make suitable modifications for improving the effectiveness of the various paddy promotion programmes.

1.3 LIMITATIONS OF STUDY

The study was conducted as the part of fulfillment of the master's degree programme. Hence, the study has inherent limitations of resources such as time, finance and researchers experience in carrying out in depth research. The study was confined to three panchayats due to the same reason. Another limitation faced by the researcher was the difficulty in obtaining the relevant data due to improper record maintenance at various offices. And since the study is based on the perception of the beneficiary farmers and extension personnel, there are chances that personal bias has crept in, in spite of utmost care taken. Still an attempt has been made.

1.4 PRESENTATION OF THE STUDY

The thesis is presented in five chapters. The first chapter is an introductory section highlighting the objectives, scope and limitations of the study. The second chapter provides the review of literature regarding in line to the objectives of the study. The third chapter is the methodology that was followed in carrying out the research. The fourth chapter deals with the salient research findings and its discussion. The fifth chapter covers summary and conclusions of the study.

REVIEW OF LITERATURE

CHAPTER II
REVIEW OF LITERATURE

A brief review of previous researches relating to the various dimensions of the present study has been made and presented in this chapter. The review is presented as below under various subsections in accordance with the objectives set and the observations to be made for the study.

2.1 Trend of paddy promotion programmes

2.2 Components of paddy promotion programs

2.3 Factors affecting implementation

2.4 Benefits accrued by the beneficiaries

2.5 Perception of beneficiary farmers

2.6 Perception of extension personnel

2.7 Constraints felt by beneficiary farmers

2.8 Constraints felt by extension personnel

2.1 TREND OF PADDY PROMOTION PROGRAMMES

After the re-constitution of the Kerala State Department of Agriculture in 1987, by replacing T & V system krishibhavans were established in each and every panchayats in the state. Village panchayat is the basic unit of development at the grassroots level. Therefore almost all the agricultural development programmes are devised, ensued and implemented through krishibhavans at the village level or

grassroots level where the Agricultural Officer act as the implementing officer of agricultural development activities (Sarala, 2008).

By analyzing the trend of financial allocations to agriculture at different levels of the economy, the knowledge level increases about of how agricultural activities are fostered with consideration of other support linkages that all-together promote agricultural development. (Ita *et al.*, 2013).

GOK (2016) report identified that the phase from 2005-06 to 2014-15, showed an increasing trend in the budget allocation in the State agriculture sector. However, the Central Government had curtailed the scheme components year by year and eventually.

2.2 COMPONENTS OF PADDY PROMOTION PROGRAMMES

Chinchu (2011) in his research has outlined various components of State Horticulture Mission operating in Kerala as production of planting materials, vegetable seed production, seed infrastructure, new garden fruits, new garden flowers, rejuvenation, integrated nutrient management/ integrated pest management, organic farming, human resource development, irrigation, protected cultivation, bee units, mechanization and post-harvest mission management.

The list of the project activities indicated by the beneficiary farmers were field level demonstration in SRI, field visits, subsides for adoption of improved technologies, training programmes, promotion of micro-irrigation system, water user association election, promotion of commodity groups, exposure visits, IAMWARM DAY, model Seed village, promotion of precision farming, and promotion of fish pond (Abirami, 2012).

The major components of ATMA plus during 2014-15 were demonstrations, farm school, farmer field school, integrated farming system and pest surveillance (GOK, 2016)

The components of Sustainable development of rice Kerala comprises of revitalization of group farming, fallow land cultivation, assistance to development agencies, assistance to Seed Development Authority, assistance to fish culture and other seasonal crops in paddy fields during non-cropping periods, assistance for establishing small scale processing and marketing units, assistance for training and farm mechanization, green card printing through farm information bureau, support to upland rice production, assistance to model *padasekharams,* special rice (GOK, 2016).

The major components of MOU, central plan scheme were assistance for seed production programme, distribution of high yielding seed varieties of paddy, system of rice intensification, setting up of demo fields of paddy using high yielding varieties of seeds, infrastructure development, integrated pest management, integrated nutrient management (GOK, 2016).

2.3 FACTORS AFFECTING IMPLEMENTATION OF PROGRAMMES

Implementation is the process through which technological, organizational and financial resources are configured together to provide an efficient operating system

According planning commission the main deficiencies in the implementation of the agricultural, rural development programmes have been wrong selection of beneficiaries/type of assistance, without considering their needs, capabilities and skills; lack of flexibility. i.e., straight -jacket guidelines issued centrally often ignore

local needs, situations and variations; inadequate delivery mechanism, malpractices etc. lack of coordinated approach, with many sectorial organisations working independently for different components of the programmes and lack of commitment on the part of agencies/agents responsible for the delivery of the programmes (SPB, 1989).

Melkotte and Vallath (1992) enlisted the factors affecting development progammes access to timely and relevant information, involvement of farmers, financial and material aspects, market facilities and infrastructure facilities.

Kumar (1999) in his study Multidimensional analysis of agricultural development programmes implemented through people's plan revealed that politics is one of important factors influencing the successful implementation of ADP's.

Geetha (2002) identified that more three fourth of the labourers of *thozhil sena* opined that political interference was the major impeding factor for the successful implementation of any new programme.

Lack of scientific planning, flaws in the action plan, lack of effective coordination and support from other institutions and agencies, lack of monitoring the implementation process, concurrent evaluation were the important factors contributed to unsatisfactory performance of the Integrated Rural Development Program (Patel, 2014).

Varughese *et al.* (2007) in his study 'Sustainable management of paddy fields in wetland ecosystem of Kerala' stated that unlike other crops, community participation is a pre-requisite for effective planning and successful implementation of rice production programmes.

Jat *et al.* (2008) in their study on 'Impact of watershed development programme' had enlisted lack of effective coordination among project officials, agriculture extension department, agriculture research station and farmers near the

study area as the main factors that affected the implementation and adoption of watershed technique.

Jeet and Kushawaha (2007) stated that farmers were identified as the key factor which affects the effective implementation and functioning of watershed programme, apart from that lack of awareness, poor economic conditions of the farmers, high cost of inputs, failure of officials to solve the non-technical problems of the farmers, indifferent behaviour in the administration, lack of guidance, non-availability of staff at the time of farmers need, lack of technical supervision and non-availability of labour.

Kulshrestha (2014) opined that the co-ordination between farmers and government functionaries, development agencies and voluntary organizations, land development activities were essential for effective implementation of watershed programme.

Kushwah *et al.* (2016) recognized that the co-ordination between farmers and government functionaries, development agencies and voluntary organizations, and land development activities were identified as the essential factors for effective implementation of watershed programmes.

2.4 BENEFITS ACCRUED BY THE BENEFICIARIES

According to Krishnakumar (1987), considerable per cent of the respondents (51.11%) were satisfied with the working of soil conservation schemes. He further stated that most of the respondents had increase in knowledge about agriculture (82.20%), skill in cultivation (74.40%), enhancement in income (70.00%) and cropping intensity (60.00%).

Thyagrajan *el al.* (1990) studied that the increase in yield levels increase in income level and increase in attitude level about Cashew Developmemt Scheme were having the foremost impact on the working of Cashew Development Programmes. The increase in skill in cultivation and increase in employment opportunities was also observed.

Soundarapandian (1992) showed that with the change in the average annual income of ₹ 852 per household 90.00 per cent of the beneficiaries crossed the poverty line after the implementation of the NREP.

Naidu and Sachinandan (1998) observed that in IRDP in Midnapore District 35.00 per cent of the sample beneficiaries had been able to cross the poverty line of ₹ 2,200 per capita annual income. This portion in Mayurbhanj District was found to be 22.50 per cent.

Most of the beneficiary farmers had medium level of indirect changes (48.34%), followed by equal number of farmers had high and low level of indirect changes (25.83%).There was an increase in social participation, decrease in cost of cultivation and increase in empowerment as a result of implementation of the project (Abirami, 2012)

Sendilkumar (2012) in his study 'Empowerment of farmers through Group Approach for Locally Adapted and Sustainable Agriculture (GALASA) programme-A journey for sustainable agriculture development' stated that the mean scores of all dimensions of empowerment were increased greatly after joining of farmers to the GALASA programme. The major reason for knowledge empowerment was mainly due to their participation in the training programmes conducted by various development agencies in the area.

Manoj and Vijayaragavan (2014) revealed that the participation of farmers in FFS has helped them in overall knowledge of crop production practices related to integrated nutrient management, seed management and water management.

Singh and Premlata (2014) based on their work on 'Effectiveness of training programmes under Agricultural Technology Mangement Agency in Bihar' pointed out that among beneficiaries of ATMA activities, about 53.30 per cent and 48.30 per cent perceived benefits in terms of 'increase in knowledge' and 'gain in skills' respectively.

Rubeena (2015) in her study "Revitalization of Agricultural Technology Management Agency (ATMA): A comparative study in Thiruvananthapuram and Kottayam districts of Kerala" reported that the farmer oriented activities like exposure visits trainings, demonstrations and farmer field schools helped to improvise the connectivity among the farmers.

Vijna (2016) reported that the beneficiaries of Comprehensive Paddy Development scheme, Peruvayal panchayat, benefited 100.00 per cent, 50.00 per cent and 75.00 per cent subsidies respectively for the purchase of seeds, chemical fertilizers and organic manures.

Unnikrishnan (2016) concluded that the beneficiaries of Comprehensive Paddy Development scheme, Adat availed 100.00 per cent and 50.00 per cent subsidies on the purchase of seeds and chemical fertilizers respectively and ₹ 3600 per hectare as ploughing charges.

Krishnan (2016) opined that cent per cent subsidy for the purchase of seeds and the cost of land preparation were availed by the Comprehensive Paddy Development scheme beneficiaries of Kadakkarappally panchayat.

Krishnan (2016) found that the 100.00 per cent and 50.00 per cent subsidies on purchase of seeds and chemical fertilizers respectively and ₹3600/ ha was given

as ploughing charges to the beneficiarcy farmer under Comprehensive Paddy development scheme in Bharanikkavu panchayat .

Maheswary (2016) figured out that cent per cent farmers were beneficiaries of Comprehensive Paddy Development Scheme in Kulakkada panchayat. It has been listed out that free seeds, subsidies, ploughing charges and mechanization were the main benefits availed by the farmers.

2.5 PERCEPTION OF BENEFICIARY FARMERS ON THE EFFECTIVENESS OF PROGRAMMES UNDER DECENTRALIZED PLANNING

According to Blalock (1963) perception had the following characteristics: It is a distinct attribute and there can be as many perceptions as there are individuals. It must be viewed in connection with the real experience of the person. It includes perceiving, interpreting and describing stimuli in terms that are meaningful to the individual. Both extraneous and intravenous variables may affect the interpretation of the stimulus and response it is likely to produce. It is a changing phenomenon that continually changes within an individual.

Sundaram (1986) in his study conducted on the effectiveness of soil conservation practices reported that major portion (75.00 %) of the beneficiaries belonged to 'medium level perception category whereas 14.00 and 11.00 per cent of the beneficiaries belonged to low and high level perception categories

Initiation of group farming in rice effectively revitalized the production background with new dynamism, interest and passion and mass participation (SPB, 1989)

Patel and Patel (1993) in their study on 'Farmers image regarding lab to land programme in South Gujarat' suggested that the overall perception of the

stakeholders about the programme is one of the crucial factors that influence the impact of the implemented programme.

Sarkar (1995) in his work on 'Participation of rural women in group farming activities in northern states of India' observed that the perception of beneficiary farmers is the key factor which decides the utility on the usefulness of agriculture development programmes.

Meera (1995) based on her research work on 'Differential adoption of plant protection technology by farmers of Kerala – A critical analysis' stated that with regard to the mean utility perception scores the two groups of farmers considered for the study differed significantly in adopting important agricultural practices.

The farmer's utility perception of agricultural development programmes implemented through people's plan is dependent on the effective employment of recommendations prescribed in the plan (Sitaram, 1997)

Kumar (1999) stated that about 63.00 per cent beneficiaries perceived that the agricultural development programmes implemented through peoples plan as 'useful' and 39.00 per cent perceived it as 'least' or 'not useful'.

About 50.00 per cent of the beneficiaries of ATMA activities perceived that two technologies were most relevant among the four implemented (BAU, 2005).

Pawar (2006) in his research analyzed that, majority of the respondents (66.67%) had medium level of perception, while 33.33 per cent respondents had low level of perception and none of the respondents came in high level of perception about technological modules implemented through Institution Village Linkage Programme in Akola district.

The study on 'Performance effectiveness of State Horticulture Mission Kerala' identified that the physical and financial targets achieved by State

Horticulture Mission Kerala was excellent and the beneficiary farmers marked their satisfaction level as good (Chinchu, 2011)

Aher (2012) revealed that majority of respondents (53.33%) were in high category of perception followed by 45.00 per cent in medium category and only 1.67 per cent in low category of perception about Adash Gaon Yogana in Buldhana district.

The study on effectiveness of training programmes under ATMA Bihar by Singh and Premlata (2014) observed that 'increase in knowledge (58.30 per cent) and gain in skills (48.30 per cent) were the benefits perceived by the beneficiary farmers.

Peter (2014) after analyzing the Lead farmer centred extension advisory and delivery service (LEADS) found out that around three- fourth of the farmers perceived the Monthly Technology Advice (MTA) as 'moderately efficient and effective'.

According to the findings made by Rubeena (2015) the farmers of Kottayam district exhibited a highly positive and significant perception about the implementation of ATMA activities than that of the farmers from Thiruvananthapuram district.

The results of the study conducted by Vijna (2016) on "Local Self Government Initiatives in Agricultural Development – A Case Study of Comprehensive Paddy Development Scheme in Peruvayal panchayat" pointed out that about 20.00 per cent of beneficiary farmers perceived the scheme as 'most useful', 75.00 per cent and 5.00 per cent beneficiaries perceived it as 'less useful' and 'not useful' respectively. At the same time 47.50 per cent found it to be 'most relevant', whereas to 42.50 per cent and 10.00 per cent beneficiaries the scheme was 'less relevant' and 'not relevant' respectively.

Unnikrishnan (2016) reported that the Comprehensive Paddy Development Scheme failed to fully satisfy the beneficiaries.

The study carried out by Anagha (2016) on 'Local self-government initiatives in agricultural development – a case study of Sustainable Paddy Development scheme in Chathamangalam panchayath' revealed that 65.00 per cent and 97.50 per cent of beneficiaries perceived Sustainable Paddy Development scheme as 'most useful' and 'most relevant' and only 2.50 per cent has perceived it as not useful, whereas none of them had perceived it as irrelevant.

Krishnan (2016) pointed out that Comprehensive Paddy Development scheme implemented in Kadakkarappally panchayat, was perceived as cent per cent 'most useful' and 'most relevant' by the beneficiaries.

Krishnan (2016) analysed Comprehensive Paddy Development scheme in Bharanikkav panchayat had summarized that more than half the beneficiaries opined that the scheme was 'most relevant' to their situation, whereas more than three-fourth perceived it as 'less useful'.

Maheswary (2016) concluded that among the total beneficiaries of Comprehensive Paddy Development Scheme from Kulakkada panchayat 42.50 per cent , 47.50 per cent and 10.00 per cent perceived it as' most useful', 'less useful' and 'not useful' respectively. The majority (72.50 %) of the beneficiaries perceived that the scheme was most relevant and less relevant (10.00%).

2.6 PERCEPTION OF EXTENSION PERSONNEL ON EFFECTIVENESS OF PROGRAMMES

Thakur *et al.* (1972) advocated the relevance of perception stating that for a programme to be efficacious, it is highly imperative that the concept and objectives

must be clear to the person who is assigned with the charge of implementing the programme.

Peter (2014) after analyzing the Lead farmer centred extension advisory and delivery service (LEADS) concluded that all the agricultural officers and agricultural assistants regularly participated in the Monthly Technology Advice (MTA) and among them 75.00 per cent of the agricultural officers perceived it as 'moderately efficient and effective', whereas only 15.00 per cent of agricultural assistants and 3.00 per cent of agricultural officers had perceived it as 'highly efficient and effective'.

2.7 CONSTRAINTS FACED BY BENEFICIARY FARMERS

Balu (1980) identified that three fourth of the participants of Intensive Agriculture Development Programme (IADP) perceived that the method of availing the benefits as more complicated.

Balishter and Chandra (1990) observed that there was delay in disbursal of loan, poor quality of assets, higher price of assets charged by seller, delay in releasing subsidy and lack or guidance were the problems faced by the beneficiaries.

Jnanadevan (1993) through his study 'An analysis of selected development programmes for promoting coconut production in Kerala' identified high labour cost, non-availability of labour in time, inadequate and untimely supply of seedlings, inadequate financial assistance, delay in timely disbursement of money, poor quality of seedlings and untimely supply of seedlings, non- availability of sufficient water for irrigation during summer months, high cost of inputs, lack of proper supervision and guidance from the extension officers.

Thomas (1998) surveyed and found out that the major problems faced in implementing watershed development programme were inadequate financial assistance, non-availability of quality planting material, political interference and inadequate training.

Sharma *et al.* (2001) asserted that constraints faced by the rice growing farmers were technical constraints: know-how and do-how in rice production technology; input availability constraints: shortage of labour at the time of transplanting, weeding and harvesting, inability to get chemical pesticide at proper time, inability to get agricultural machinery/ implements at proper time for various operations, inability to get chemical fertilizers at proper time of application; economic constrains: high cost of cultivation, lack of profitable marketing system; situational constraints: drought proneness of the area, flood proneness of the area.

Varghese (2012) in her study on 'Efficacy of watershed development programmes in Kerala: A gender perspective' found out the major constraints as lack of community participation, bureaucratic nature of implementation, target oriented work.

Major constraints faced by the beneficiary farmers were, high labour cost (93.30%), adequate quantity of FYM/ Compost was not available (83.33%), high cost of chemical fertilizers (81.67%), non- availability of labour at peak time (79.17%), lack of remunerative price for paddy (74.17%), lack of marketing facilities (67.50%), resistance from women labour to transplant single seedling(65.00%), difficulty in intercultural operations (63.33%), lack of cooperation and coordination among the farmers (60.00%), non-availability of quality seed on time (58.33%), problem of middlemen in marketing (54.17%), inadequate credit facilities (49.17%), lack of co-operation of members in water user association (44.16%), bad tenurial system (35.50%), water ways running through holdings of different farmers leading to social problems (30.83%), managerial problems due to fragmentation of land holdings

(28.33%), poor socio-economic status of farmers in adoption of new technology (23.33%), non-availability of implements for intercultural operation (16.67%), negligence among farmers to take responsibility to protect community assets (12.50%) and lack of proper compensation settlements against crop insurance for inundated fields (Abirami, 2012).

Verma *et al.* (2013) conducted study on constraints causing serious concern to rice growers in Banswara district of Rajasthan and revealed that 43.00 per cent of rice producers faced medium level of constraints in adoption of rice production technology.

Peter (2014) from her study inferred that the timely availability of seeds and other inputs for farming activities and marketing problems were the major constraints experienced by the farmers.

Maheswary (2016) investigated the constraints evolved during the implementation of the Comprehensive Paddy Development Scheme in Kulakkada panchayat and disclosed that high labour cost, non-availability of labourers on time, lack of proper marketing system, lack of irrigation facility and low price were the dominant ones among the all identified constraints.

Unnikrishnan (2016) has recognized that high wage rate, non- availability of timely labourers, lack of financial assistance, lack of suitable landholdings, lack of energy resources for farming, lack of technical advice, and non-availability of inputs were the prime constraints experienced in the implementation of the Agricultural Development Programmes in Adat panchayat.

Krishnan (2016) through her study uncovered that high wage rate, non-availability of labourers in time, lack of support from nodal agencies, absence of group activities, low productivity and lack of storage facilities were the key

constraints encountered during the implementation of the scheme in Kadakkarappally panchayat.

High labour cost, non-availability of labour in time, lack of support from nodal agencies, non-availability of quality seeds and seedlings, absence of group activities, lack of improved machineries and inputs were the chief constraints felt by the beneficiaries for the implementation of Comprehensive Paddy Development Scheme in Bharanikkav panchayat (Krishnan, 2016).

Anagha (2016) discovered that the high wage rate, non-availability of labourers, problems in infrastructure facilities and marketing, pest and disease incidence, lack of proper financial assistance and lack of technical advice were the predominant constraints prevailed during the implementation of the Sustainable Paddy development scheme in Chathamangalam panchayat.

Vijna (2016) found out that high wage rate for agricultural labourers, non-availability of labour on time, lack of support from nodal agencies, absence of group farming activities, low productivity, low price, non-availability of quality seeds and seedlings and lack of storage facilities were the main constraints that the beneficiaries of Peruvayal panchayat faced during the implementation of Comprehensive Paddy Development Scheme.

2.8 CONSTRAINTS FELT BY EXTENSION PERSONNEL

Kumar *et al.* (2011) in their study of constraints expressed by the extension functionaries involved in ATMA, as too many schemes and vacancies, less demonstrations on the existing farming systems in the district and lack of technological training on different farming systems pertaining to agriculture.

Rubeena (2015) stated that lack of institutionalization of ATMA and of lack of single line command were the most important constraints as per the implementing officers of ATMA of Kottayam and Thiruvananthapuram districts respectively.

Peter (2014) revealed that irregularity in conducting satellite meetings, unavailability of the solutions for the problems on time, lack of adequate training programmes for farmers as well as extension personnel were the important constraints perceived by the implementing officers of LEADS.

METHODOLOGY

CHAPTER III
METHODOLOGY

The present research was carried out on the topic "Analysis of development programmes for paddy promotion under decentralized planning in Thrissur district" during 2016-17. The procedure and techniques followed are described under the following headings.

3.1 Locale of the study and description of the study area

3.2 Research design

3.3 Selection of the respondents

3.4 Selection of variables

3.5 Methods followed for measurement and quantification of variables

3.6 Description of schemes on development of paddy cultivation

3.7 Tools used for data collection

3.8 Statistical tools and tests used

3.1 LOCALE AND DESCRIPTION OF THE STUDY AREA

The study was conducted in Thrissur district of Kerala. The district lies between latitude 10^0 10' and10^0 46' and longitude 76^0 54' in central Kerala.

Based on the secondary data and discussion with the Officials of State Department of Agriculture, one panchayat each was selected from three leading blocks *viz;* Pazhayannur, Puzhakkal and Anthikkad with substantial cropped area

under paddy cultivation. Thus Chelakkara, Adat and Arimpur panchayats were identified from Pazhayyunur, Puzhakkal and Anthikkad blocks respectively.

Table 1: Features of selected panchayats

Features	Name of the panchayat		
	Chelakkara	**Adat**	**Arimpur**
Total area	5975.86 ha	23.22 Sq. Km	22.65 Sq. Km
Population	41433	39336	32298
Area under rice	690 ha	1101.62 ha	979 ha
Season of rice cultivation	Virippu, Mundakan	Mundakan	Mundakan
Other features		Mainly organic	Fallow land - 206 ha

3.2 RESEARCH DESIGN

Research design as defined by Kerlinger (1995) is the plan and structure of investigation so conceived as to obtain answers to research questions. Ex- post facto research design was employed to study the perception of beneficiary farmers and extension personnel on effectiveness of paddy promotion programmes under decentralized planning.

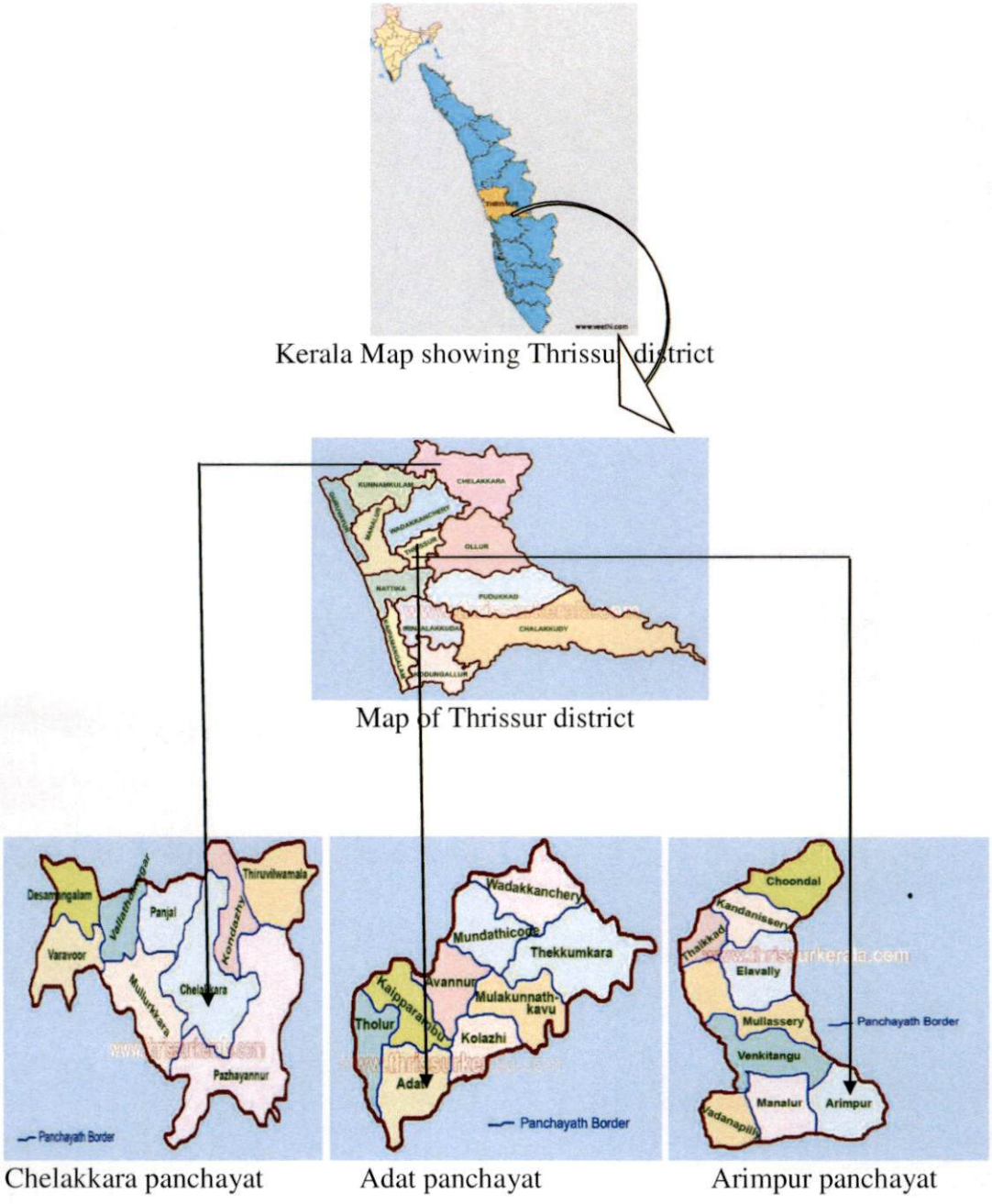


Fig 1. MAP SHOWING LOCALE OF THE STUDY

3.3 SELECTION OF THE RESPONDENTS

Ninety beneficiary farmers of paddy promotion projects under decentralized planning from the three panchayats and thirty extension personnel from the three blocks were selected randomly as the respondents.

Table 2: Selection of respondents

Respondents	**Panchayat**			**Total**
Beneficiary farmers	**Chelakkara**	**Adat**	**Arimpur**	
	30	30	30	**90**
	Block			
Extension Personnel	**Pazhayannur**	**Puzhakkal**	**Anthikkad**	
	10	10	10	**30**

3.4 SELECTION OF THE VARIABLES

Based on the objectives, review of literature and discussion with the Scientists of Kerala Agricultural University, 25 independent variables were identified and 45 statements were prepared. These were subjected to judges rating and out of 50 judges 30 of them responded

The judges rated the variables and statements on a six point continuum as 'most relevant', 'more relevant', 'relevant', 'less relevant', 'least relevant' and 'not relevant' with scores of 5, 4, 3, 2, 1 and 0 respectively.

The response under each item was multiplied with the respective scores and then added up to derive relevancy index using the following formula:

$$\text{Relevancy Index} = \frac{\text{Total score obtained on each item}}{\text{Maximum possible score}} \times 100$$

Considering the relevancy indices, the variables and statements were selected for the study.

3.4.1 Dependent variables

Perception of beneficiary farmers and extension personnel on effectiveness of paddy promotion programmes under decentralized planning in Thrissur district.

Table 3: Summary list of variables and their measurement procedure

Sl.no	Variable	Measurement
	Dependent variable	
	Perception	Developed for the study
	Profile characteristics of beneficiary farmers	
1	Age	Census report of GOI (2011)
2	Gender	Fathima (2015)
3	Education	Chinchu (2016)
4	Family size	Sabira (2016)
5	Occupation	Kumar (1999) with modification
6	Subsidiary occupation	Developed for the study
7	Annual income	Rubeena (2015)
8	Farm size	Census report of GOI (2011), with modification
9	Paddy area	Census report of GOI (2011), with

		modification.
10	Farming experience	Developed for the study
11	Pattern of rice cultivation	Developed for the study
12	Mass media exposure	Kumar (1999) with modification
13	Social participation	Sabira(2016) with modification
14	Contact with extension agency	Sabira (2016) with modification
15	Economic motivation	Supe(1969) with modification
16	Risk orientation	Supe(1969) with modification
17	Scientific orientation	Supe(1969) with modification
18	Market orientation	Sajeevchandran (1989) with modification

3.5 MEASUREMENT AND QUANTIFICATION OF VARIABLES

3.5.1 Dependent variable -Perception

Perception of beneficiary farmers and extension personnel on effectiveness of paddy promotion programmes under decentralized planning in Thrissur district.

In this study perception on effectiveness on paddy promotion programmes is operationally defined as the meaningful interpretation of the success/ effectiveness of the programme as sensed by the beneficiary farmers and extension personnel.

Perception of the above respondents on effectiveness of paddy promotion programmes under decentralized planning was considered as dependent variable, were studied under five dimensions namely socio-economic, agricultural input, institutional, knowledge and empowerment. Each dimension represented by set of statements where every statement was evaluated by using a five-point continuum

(*Likert scale).*The agreements were strongly agree, agree, undecided, disagree and strongly disagree and weights assigned for different agreement were 5, 4, 3, 2 and 1 respectively.

Perception index was calculated for each dimension using the equation:

$$\text{Perception index} = \frac{\text{Total score obtained on each statement}}{\text{Total possible score}} \times 100$$

Overall perception index and dimension-wise perception index was found out for beneficiaries and extension personnel. Thereafter the perpection indices of beneficiary farmers from three selected panchayats were subjected to Kruskal Wallis test and each panchayats were ranked based on the descending order of mean score obtained.

The extension personnel were categorized according to their perception indices as:

Table 4: Categorization based on perception index

Sl. No.	**Perception index**	**Category**
1	Less than 20	Very low
2	20 to 39	Low
3	40 to 59	Average
4	60 to 79	Good
5	80 and above	Excellent

3.5.2 Factors influencing the implementation of paddy promotion programmes

In the light of pilot study, literature review and discussion with the experts, dimension wise factors affecting implementation of paddy programmes for Centrally and State sponsored as well as those under decentralized planning were screened out with consensus approach and given to 30 extension personnel from three selected blocks. The respondents were requested to rate their response for each factor as 'most influenced', 'somewhat influenced' and 'less influenced' having 3, 2 and 1 as the assigned weightage respectively.

Factor index for each dimension under factors influencing implementation was calculated by adding up the individual factor Index under each dimension there after dividing it with the number of factors under that particular dimension.

$$\text{Individual Factor Index } (F.I._i) = \frac{\text{Total score obtained}}{\text{Maximum possible score}} \times 100$$

$$\text{Factor index } (F.I.) = \frac{\text{Sum of individual indices}}{\text{Number of individual factors}} \times 100$$

The individual factor indices thus generated for factors influencing Centrally and State sponsored schemes and those under decentralized planning were compared using independent t- test.

3.5.3 Benefits accrued

In accordance with the secondary data analysis, sets of all possible benefits that the beneficiaries might have gained from various paddy promotion programmes implemented under decentralized planning for the last five years were enlisted and the respondents were asked whether the benefit was availed or not and the response were assigned '0' and '1' weights for 'No' and 'Yes' respectively.

Percentage analysis was carried out to quantify the benefits gained by the farmers.

3.5.4 Constraints felt by the respondents

Constraint is operationally defined as the difficulties or problems felt by the beneficiary farmers and extension personnel while implementing the paddy promotion programmes.

A list of constraints for both the respondents were identified and categorized based on review of literature, pilot study, and discussion with extension personnel and experts. The procedure adopted is as follows:

The respondents were asked to mark their response on a three point continuum, as 'most felt', 'moderately felt' and 'less felt' constraint based on the gravity with which they had experienced the difficulty for which the weightage assigned were 3, 2 and 1 respectively.

Overall as well as dimension wise constraint index was calculated for each respondent using the equation:

$$\text{Constraint index} = \frac{\text{Total score obtained by the respondent}}{\text{Maximum possible score}} \times 100$$

The constraint indices of beneficiaries from three panchayats were analyzed by employing Kruskal Wallis test and the major constraints for each panchayats were ranked based on the descending order.

Factor index was calculated for identifying the constraints felt by extension personnel by dividing the summated constraint indices with the number of constraints under each dimension and was ranked in descending order.

3.5.2 Measurement and scoring procedure adopted for independent variables

3.5.2.1 Age

Age refers to the number of years completed by the farmer at the time of interview. The respondents were categorized as young, middle and old age groups as per the Census report (2011) of Government of India.

Table 5: Age scoring procedure

Category	Age (in years)	Score
Young	Up to 35	1
Middle	36 to 55	2
Elderly	Above 55	3

3.5.2.2 Gender

Gender refers to whether the respondent surveyed was a male or female. Accordingly they were categorized into two groups as done by Fathima (2015).

Table 6: Gender scoring procedure

Category	Score
Male	1
Female	2

3.5.2.3 Educational status

Educational status refers to the extent of literacy obtained by the respondent at the time of study. The respondents were classified based on the scoring procedure followed by Chinchu (2016) with slight modification.

Table 7: Educational status scoring procedure

Category	Score
Illiterate	0
Primary school	1
High school	2
Higher secondary	3
Diploma	4
Graduate and above	5

3.5.2.4 Family Size

Family size can be operationally defined as the total number of members in the family living together. The scoring procedure adopted by Sabira (2016) was used for the study.

Table 8: Family size scoring procedure

Number of members	Category	Score
Up to 2	Small	1
3 to 4	Medium	2
5 to 6	Large	3
Above 6	Very large	4

3.5.2.5 Occupation

Occupation can be defined as the present major employment or job of the respondent, from which the respondent derives his major source of income for living.The scoring

procedure followed was that of Kumar (1999) with modification and is given below:

Table 9: Occupation scoring procedure

Major occupation	Score
Farming	6
Business	5
Government job	4
Private job	3
Labourer	2
Self-employed	1

3.5.2.6 Subsidiary occupation

Subsidiary occupation can be operationally defined as the additional job that the respondent undertakes other than the main occupation of paddy cultivation. The scoring procedure developed for the study is as follows:

Table 10: Subsidiary occupation scoring procedure

Subsidiary occupation	Score
Farming	7
Business	6
Government job	5
Private job	4
Labourer	3

Self-employed	2
Retired	1
Nil	0

3.5.2.7 Farming experience

Farming experience in this study was operationally defined as the number of years completed since the respondent got actively involved in paddy cultivation. The response were assigned the following scores:

Table 11: Farming experience scoring procedure

Experience (in years)	**Score**
Up to 15	1
16 to 30	2
31 to 45	3
Above 45	4

3.5.2.8 Annual income

Annual income is operationally defined as the total earnings made by the farmer and the members of the family in a year from the farm and other sources in rupees. Scoring procedure followed by Rubeena (2015) with modifications was used in the study.

Table 12: Annual income scoring procedure

Annual income (in rupees)	Score
Up to ₹.50000	1
₹. 50001 to ₹. 100000	2
Above ₹.100000	3

3.5.2.9 Farm size

Farm size refers to the total area of cultivated land possessed by the respondent at the time of conducting survey.

The responses were categorized based on procedure as given in Census report of GOI (2011) with slight modifications.

Table 13: Farm size scoring procedure

Size of land holding (in acres)	Score	Category
Up to 1	1	Marginal
1.01 to 3	2	Small
3.01 t0 5	3	Medium
Above 5	4	Large

3.5.2.10 Area under paddy cultivation

Area under paddy cultivation can be operationally defined as the total area in which the respondent had cultivated paddy crop in the previous year.

The responses were categorized based on procedure as followed in Census report (2011) with slight modifications relevant in the contest of the study.

Table 14: Area under paddy cultivation scoring procedure

Size of land holding (in acres)	Score	Category
Up to 1	1	Marginal
1.01 to 3	2	Small
3.01 t0 5	3	Medium
Above 5	4	Large

3.5.2.11 Pattern of rice cultivation

It can be operationally defined as the type of cultivation land chosen by the respondent for paddy cultivation, i.e., whether it is on leased land, owned land or the respondent has cultivated on both the leased and owned lands. The scoring procedure developed for the study is as follows:

Table 15: Pattern of rice cultivation

Pattern of rice cultivation	Score
Leased	1
Owned	2
Both leased and owned land	3

3.5.2.12 Mass media exposure

Mass media exposure refers to the frequency with which the farmer utilizes different mass media sources to gather information. The scoring procedure adopted was that of Kumar (1999) with modifications.

Table 16: Scoring procedure for mass media exposure

Mass Media	Frequency	Scores
1.Radio a) General programmes b)Agricultural programmes 2. Newspaper 3.Television a) General programmes b) Agricultural programmes 4. Magazines/ bulletins/ leaflets 5. Internet sources	Daily	5
	2- 6 days a week	4
	Once a week	3
	Once in a fortnight	2
	Rarely	1
	Never	0

The respondent wise total score was computed by adding up the scores on all the five items and was considered as the respondents score on mass media exposure. The score ranges from 0 to 35.

Mean and standard deviation was employed to categorize the respondents into low, medium and high categories.

3.5.2.13 Social participation

Social participation refers to the degree of involvement of respondent in any formal organization either as a member or an office bearer. Procedure followed by Sabira (2016) with modification was used for the study.

Table 17: Membership status scoring procedure

Membership Status	Score
Not a member in any organization	0
Member in any one of the organization	1
Officer bearer	2

Table 18: Extent of participation scoring procedure

Extent of participation	Score
Never	0
Occasionally	1
Regularly	2

The total score was derived by summating the membership status and extent of participation scores of the individual. Based on the total score obtained, mean and standard deviation was computed and the respondents were categorized into groups.

3.5.2.14 Contact with extension agency

It was defined as the degree to which the respondents contact or knows various extension personnel. The method followed by Sabira (2016) with modification was

used to measure the frequency of visits made by the respondents. The response were scored as:

Table 19: Contact with extension agency scoring procedure

Frequency of contact	Score
Two/more times a week	6
Once in a week	5
Once in a fortnight	4
Once in a month	3
Rarely	2
Never	1

The scores obtained by the individual respondents were added to get the total score for contact with extension agency. Based on the total score, mean and standard deviation were found out and the respondents were grouped into low, medium and high categories.

3.5.2.15 Economic motivation

Economic motivation refers to the extent to which the farmer is oriented towards profit maximization and relative value he places on monetary gains. The measurement procedure followed by Supe (1969) with modification was employed in the study.

The scale consisted of five statements to be rated on a five point continuum ranging from strongly agree to strongly disagree with the score ranging from 5 to 1

respectively. The total score was computed by summating the scores obtained by the respondent for all the statements.

Mean standard deviation was employed to classify the respondents into low, medium, high categories.

3.5.2.16 Risk orientation

Risk orientation was operationalized as the degree to which a farmer is oriented to risk and uncertainty and has courage to face the problems in farming. Risk orientation scale of Supe (1969) with slight modification was employed for the study. The scale consisted of five statements. The responses for positive items were scored as 5, 4, 3, 2 and 1, while for negative items the scores were reversed in the order of magnitude, respectively.

The scores obtained for each statement were summed up to get individual respondents risk orientation score. The respondents were grouped into three categories based on the mean and standard deviation

3.5.2.17 Scientific orientation

Scientific orientation refers to the degree to which a farmer is oriented towards the use of scientific methods in decision making and in farming. The scale developed by Supe (1969) was used with suitable modification to operationalize this variable. The scores assigned for each statement ranged from 5 to 1. The summated scores of all the statements gave the score of the respondent's scientific orientation score. The maximum possible score was 25 and minimum possible score was 5.

Mean standard deviation was employed to classify the respondents into low, medium, high categories.

3.5.2.18. Market orientation.

The degree to which the farmer is oriented towards the market in terms of demand and price of his produce. In order to know the respondent's market orientation, the scale used by Sajeevchandran (1989) with slight modification was used. The scale consisted of 8 statements and the statements were given scores ranging from 5 to 1 for strongly agree to strongly disagree, respectively. The total was computed and the respondents were classified into categories based on the derived mean and standard deviation.

3.5.3 Trend of paddy promotion programmes implemented through Krishibhavans

Based on the secondary data collected from Thrissur PAO office, Krishibhavans and Panchayat offices of Chelakkara, Adat and Arimpur as well as data from various departmental websites, the trend of paddy promotion programmes for the last five years (2011-12 to 2015- 16) was analyzed.

3.5.4 Components of paddy promotion programmes

Based on the secondary data collected from Thrissur PAO office, Krishibhavans of Chelakkara, Adat and Arimpur the components of paddy promotion programmes was identified and delineated.

3.6. DESCRIPTION OF SCHEMES ON DEVELOPMENT OF PADDY CULTIVATION

The schemes implemented by the department of Agriculture for the development of paddy cultivation in Kerala during the period of study are briefed

below:

3.6.1 Centrally sponsored schemes

3.6.1.1 Rashtriya Krishi Vikas Yojana (RKVY)

Government of India has launched a special central assistance scheme on RKVY to evolve a strategy to rejuvenate agriculture sector. The fund was provided as 100 per cent grant to the states by the Government of India. Components are enlisted:

1) Integrated development of major food crops such as wheat, paddy, coarse cereals, minor millets, pulses, oilseeds,

2) Agriculture mechanization:

3) Activities related to enhancement of soil health

4) Development of rain fed farming systems

5) Support to State seed farms

6) Integrated pest management schemes

7) Encouraging non- farm activities

8) Strengthening of infrastructure to promote extension services

9) Enhancement of horticultural production and popularization of micro irrigation systems

10) Animal husbandry and fisheries development activities

11) Special schemes for beneficiaries of land reforms

12) Undertaking concept to completion projects

13) Grant support to the State Government institutions that promote agriculture/ horticulture

14) Study tours of farmers

15) Organic and bio-fertilizers

16) Innovative schemes

3.6.1.2 Macro Management- Rice Development – MOU Rice development (90% CSS)

This is a centrally sponsored scheme on rice development implemented with a view to increase the productivity of rice through further popularization of high yielding varieties on a cost sharing basis in the ratio 90:10 (Central: State). This scheme was discontinued by Govt of India from 2013-14.

The main components of this central plan scheme are given below.

1) Assistance for seed production programme

2) Distribution of high yielding seed varieties of paddy:

3) System of Rice Intensification (SRI):

4) Infrastructure development:

5) Integrated pest management

6) Rice development (MOU)- integrated pest management

7) Integrated nutrient management:

3.6.1.3 National Food security Project

A major central scheme launched during 2008-09 for implementation through a convergence approach for increasing the production of food crops. In order to further support the project by exploiting the regional potential separate region specific assistance for location specific sub projects were approved during 2009-10.

Components of the food security project includes:

1) Scaling up of model for food security

2) Food security through women groups

3) Soil fertility analysis including micro-nutrients

4) Need based support of link with dairy, animal husbandry and fisheries pertaining to paddy farmers.

5) Data generation through department of economics and statistics.

6) Support for upland rice production

7) Mechanization service support

8) Need based support for critical groups in other schemes on a project mode

9) Support for irrigation

10) Awareness and publicity

3.6.2 State Schemes

3.6.2. 1 Sustainable Development of Rice

This scheme is intended for the sustainable development of paddy cultivation and thus to increase the rice production in the State. In some years, this scheme was

mentioned in the State budget as 'Integrated Food crop Production- Rice development'.

The components of this scheme are the following.

1) Revitalization of group farming:

2) Fallow Land cultivation

3) Assistance to development agencies

4) Assistance to Seed Development Authority

5) Assistance for fish culture and other seasonal crops in paddy fields during non-cropping periods

6) Assistance for establishing small scale processing and marketing units

7) Assistance for training and farm mechanization

8) Green card printing through Farm Information Bureau

9) Support to upland rice production

10) Assistance to Model *Padasekharams*

11) Special rice

3.6.2.2 Agriculture Technology Management Agency (ATMA) and ATMA plus

ATMA is an autonomous institution set up at district level to ensure delivery of extension services to farmers. In Kerala, ATMA is being implemented since 2005-06. A number of farmer oriented activities were carried out like exposure visits, trainings, demonstrations, farm schools, group organization and other information and communication programmes. With a view to revitalize agricultural advisory services in the state, a series of programmes were initiated from 2010-11 onwards such as the mapping of agro-ecological units, soil fertility status, mapping of Indigenous Technical

knowledge (ITK) and farmer innovations in agricultural were taken up in a project mode to plan and implement science and technology based agricultural development programmes in the states. SREP was proposed and its analysis revealed several difficulties In order to overcome the difficulties and to revitalize agricultural extension in the states, ATMA Plus was formulated during 2013-14 state plan scheme. It envisages several innovations suitable for Kerala.

3.6.3 Schemes under decentralized planning

3.6.3.1 Adat

3.6.3.1.1 Comprehensive organic based rice development project

The scheme was started with an aim to sustain the existing paddy fields and to increase the productivity. The programme had different components in 2011-12, like distribution of seed, production enhancing items, organic manure, *Pseudomonas, Trichoderma,* sprayers, and bio-plant protectors. Later distribution of seed was the major component and it aimed at making available high yielding variety seeds to the kole lands of Adat. In 2014-15, a biennial scheme was launched and the component included was to give assistance to farmers to meet the expense incurred in labour cost.

3.6.3.1.2 Paddy cultivation assistance to SC youth

The scheme was initiated with an objective to provide assistance to the SC youth. An amount of ₹ 4500 / ha. was proposed but due to lack of fund ₹ 3000/ha was given.

3.6.3.2 Arimpur

3.6.3.2.1 Distribution of High yielding variety paddy seed

The scheme was implemented each year with an objective to distribute high yielding variety seeds and thereby to increase the productivity of the crop.in 2012-13 in addition to seed distribution Knapsack sprayers were also distributed.

3.6.3.3 Chelakkara

3.6.3.3.1 Comprehensive rice development project

To increase the productivity through distribution of high yielding variety seeds, organic manure, fertilizers, *Pseudomonas,* micronutrients were distributed, to uplift the socio-economic status of the farmers through labour cost incentives, assistance for adopting planting plant protection measures through distribution of Knapsack sprayer.

3.6.3.3.2 Distribution of seed, organic manure, chemical fertilizer, green manure

To increase the productivity through distribution of high yielding variety seeds, organic manure, fertilizers and pesticides. To improve the soil fertility through distribution of green manure seed.

3.6.3.3.3 Distribution of Knapsack sprayer and weed cutter

In 2014-15, knapsack sprayer and weed cutter were distributed to paddy farmers and garden land farmers respectively to promote paddy cultivation.

3.7 TOOLS USED FOR DATA COLLECTION

A structured interview schedule was developed based on the objectives of the study and review of literature. This schedule was pre-tested in non-sample area for practicability and relevancy. The data were collected through personal interview method.

3.8 STATISTICAL TOOLS AND TESTS USED

The collected data were scored, tabulated and analyzed using the following statistical tools and techniques.

3.8.1 Frequency and percentage

Percentage analysis was carried out to analyse the secondary data, benefits accrued by the beneficiary farmers and perception of extension personnel on effectiveness of paddy promotion programmes. Frequency as well as percentage analysis was done to categorize the respondents based on their age, gender, educational status, family size, occupation, subsidiary occupation, experience, annual income, total farm size, area under paddy cultivation and pattern of cultivation.

3.8.2 Mean

The arithmetic mean is the sum of the scores divided by their number. This measure was used to categorize the respondents based on their economic motivation, risk orientation, mass media exposure, social participation, contact with extension agency, scientific and market orientation were classified into low, medium and high categories.

3.8.3 Standard deviation

It was defined as the square root of the arithmetic mean of the sum of the square of the deviation taken from the arithmetic mean. This measure was used to categorize the respondents based on their economic motivation, risk orientation, mass media exposure, social participation, contact with extension agency, scientific and market orientation into low, medium and high categories.

3.8.4 Kruskal Wallis one way Analysis of Variance

The test was employed to measure the significant difference in the perceived effectiveness of paddy promotion programmes and constraints felt by the beneficiary farmers of three panchayats.

3.8.5 Independent t-test

Independent t- test was carried out to compare the factors influencing the implementation of Central and State sponsored programmes and those under decentralized planning. SPSS package was used to analyze the data.

3.8.6 Indices

Relevancy index, perception index, factor index and constraint index was employed to analyse the data.

RESULTS AND DISCUSSION

CHAPTER IV
RESULTS AND DISCUSSION

This chapter highlights the findings of the study in accordance with the objectives and observations made.

4.1 Trend of paddy promotion programmes implemented through Krishibhavans – An analysis

4.2 Components of the paddy promotion programmes

4.3 Stages of scheme intervention

4.4 Profile of beneficiary farmers

4.5 Benefits accrued

4.6 Perception of beneficiary farmers and extension personnel on the effectiveness of programmes under decentralized planning

4.7. Constraints felt by beneficiary farmers and extension personnel

4.8. Suggestions to improvise the effectiveness of paddy promotion programmes

4.1 TREND OF PADDY PROMOTION PROGRAMMES IMPLEMENTED THROUGH KRISHIBHAVANS –AN ANALYSIS

4.1.1 Per cent share of agriculture and allied sectors in the central budget (2011-12 to 2016-17)

Table 20: Per cent share of agriculture and allied sectors in the central budget (2011-12 to 2016-17)

Year	Total Union budget (in crores)	Amount allotted for agriculture and allied sectors (in crores)	Per cent share (%)
2011- 12	558172	46255	8.29
2012-13	556176	56669	10.19
2013- 14	614134	64098	10.44
2014-15	426811	11531	2.70
2015-16	582707	11657	2.00
2016-17	706248	19394	2.75

Source: (GOI, 2017)

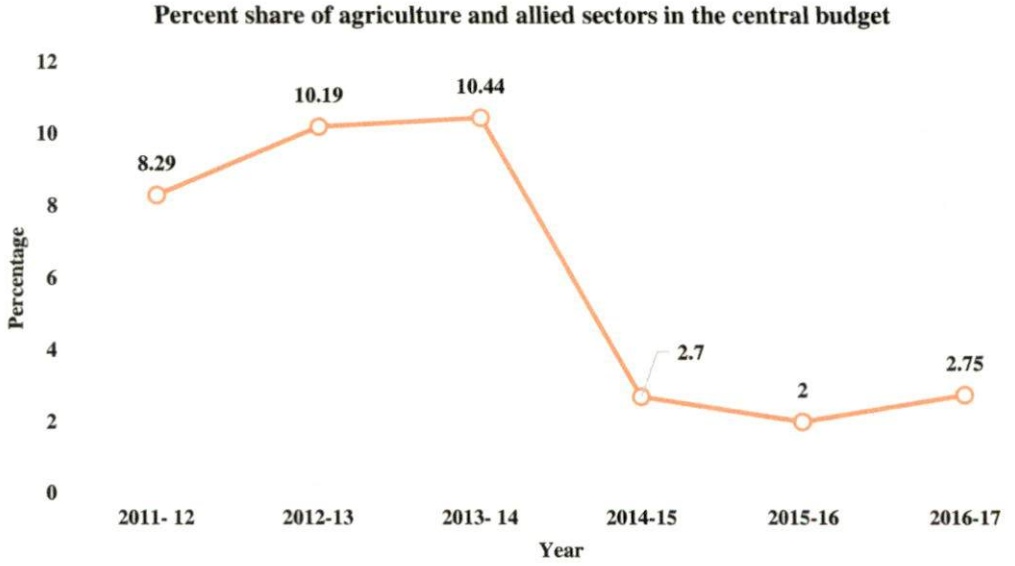


Fig.2. Graph showing the per cent share of agriculture and allied sectors in the central budget (2011-12 to 2016-17)

The trend analysis (Table 20 and Fig. 2) of the amount allotted for agriculture and allied sectors in the Union budget shows that there was an increase in the per cent of share, from 2011- 12 to 2013- 14. Then the drop is sharp for succeeding two years and a slight increase was noticed in the recent year. This may be due to the reduction in RKVY fund allocations as well as reduction in area under rice cultivation.

This findings is in accordance with the GOK, 2016 report, which states that the Central government had been reducing the scheme components year by year and finally had withdrawn all the macro management schemes by the year 2013-14.

4.1.2 Per cent share of paddy at state level implementation (inclusive of both central and state share)

Table 21: Per cent share of paddy at state level implementation (inclusive of both central and state share)

Year	State crop husbandry outlay (in crores)	Amount set exclusively for paddy programmes (in crores)*	Per cent share (%)
2011- 12	136.50	29.70	21.76
2012-13	273.00	50.70	18.57
2013- 14	296.20	50.60	17.08
2014-15	338.37	33.52	9.90
2015-16	340.18	33.82	9.94

*(Source: GOK, 2011; 2012; 2013; 2014; 2015). *includes state share of CSS schemes in exclusive paddy schemes*

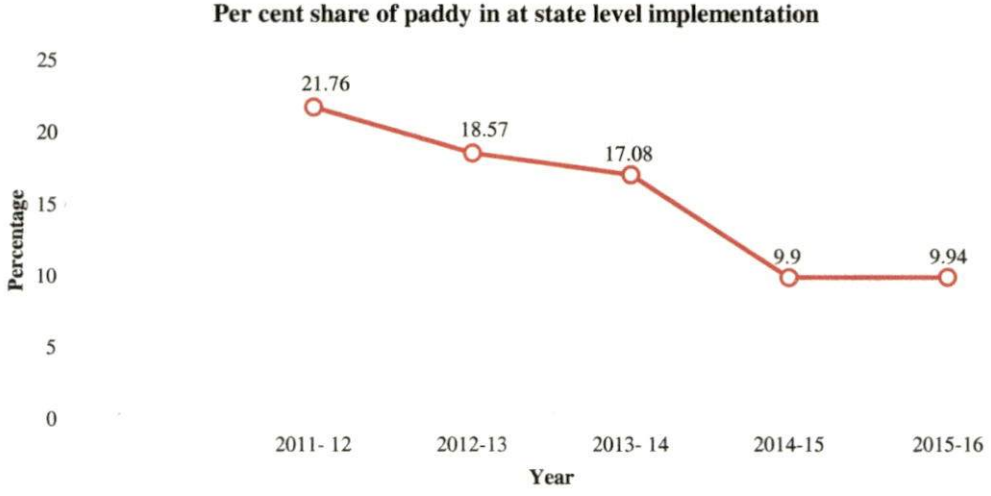


Fig 3: Graph showing per cent share of paddy at state level implementation

The results in the Table 21 and Fig. 3 gives the trend of per cent share allotted exclusively for paddy promotion programmes in crop husbandry outlay of the state. It is clearly visible that the per cent share of exclusive paddy promotion programmes is showing a decreasing trend even when the total State crop husbandry outlay is showing

an increasing trend. This may be due to the shift in thrust area preference to other sub-sectors in crop husbandry other than paddy cultivation and reduction in the paddy sown area.

GOK (2016) reported an increasing trend in the budget allocation in Agriculture and allied sectors during the period from 2005-06 to 2014-15 and pointed out that more thrust has been given to the sub-sector of agriculture and marketing, storage and warehousing. The report also reveals that the paddy area in Kerala has reduced considerably from the formation of the State of Kerala up to the date. This substantiates the decreasing trend obtained in the results.

4.1.3 Share of paddy schemes in State plan for Thrissur district

Table 22: Share of paddy schemes in State plan for Thrissur district

Year	Total Plan amount allotted to the State (inclusive of central and state schemes) (in lakh rupees)	Total Plan amount allotted to Thrissur (in lakh rupees)	Amount allotted exclusively for paddy schemes in Thrissur district (in lakh rupees)	Per cent share of paddy schemes in state plan	Per cent share of paddy schemes in state plan alloted to Thrissur district
2011-12	50039	1630.99	399.96	0.80	24.52
2012-13	70939	1521.34	429.20	0.61	28.21
2013-14	80816	2467.98	537.89	0.67	21.79
2014-15	93832	2619.99	332.08	0.35	12.67
2015-16	95332	1928.51	319.70	0.34	16.58

Source: (GOK, 2012; 2013; 2014; 2015; 2016)

Results of Table 22 reveal that the share allotted for exclusive paddy promotion programmes in the State Plan shows a declining trend, even when the total plan amount is increasing yearly.

The per cent share allotted exclusively for paddy promotion programme in the Thrissur Plan fund draws attention to the increase in the year 2012-13 and thereafter a decreasing trend is noticed in the succeeding two years followed by an increase.

This may be the result of decreasing area under paddy in Thrissur district and increasing productivity of rice as a result of implementation of various paddy promotion schemes, technology and extension advisory system.

Thrissur district has witnessed a reduction of around 43.70 per cent of paddy area since the year of 1999-2000 and the size of operational holdings in all districts has been reduced, and the maximum reduction is in Thiruvananthapuram district followed by Alappuzha and Thrissur (GOK, 2016). This is in line with the present research findings.

Table 23: Percentage of amount allotted for paddy promotion under decentralized planning

Year	ADAT			ARIMPUR			CHELAKKARA		
	Total allocation for all schemes (in lakh rupees)	Allocation for paddy (in in lakh rupees)	Per cent allotted for paddy (%)	Total allocation for all schemes (in lakh rupees)	Allocation for paddy (in lakh rupees)	Per cent allotted for paddy (%)	Total allocation for all schemes (in lakh rupees)	Allocation for paddy (in lakh rupees)	Per cent allotted for paddy (%)
2011-12	39.24	20.24	**51.58**			**	24.60	14.00	**56.91**
2012-13	27.37	27.37	**100**	12.50	12.50	**100**	18.56	14.40	**77.60**
2013-14	30.00	30.00	**100**	17.41	13.50	**77.53**	24.00	18.60	**77.50**
2014-15	18.50	16.50	**89.19**	17.87	12.82	**71.73**	26.75	18.44	**68.92**
2014-15	23.16	21.16	**91.36**	23.79	20.97	**88.17**	30.15	20.39	**67.63**

**Beneficiary share excluded **NA- Data not available (source: combiled data from (Sulekha, 2017)*

scheme register & Krishibhavan *data records 2011-12 to 2015-16)*

 # Sulekha is a web based tool for monitoring of plan projects of local bodies. The Sulekha Plan Monitoring System was designed as a comprehensive e-Governance solution that would facilitate, streamline and track the entire planning process - plan formulation, appraisal, revision, approval, monitoring, and expenditure tracking of plan projects - at the local level and make the data available to both the Government and the Public for further use.

4.1.4 Percentage of amount allotted for paddy promotion under decentralized planning

The Table 23, gives the per cent share allotted for paddy promotion programmes under each krishibhavans under study. The bird's eye view of the table reveals that in all the three panchayats more than half of the total allocation given for paddy promotion. It can also be seen that during 2012- 13 and 2013-14, the total allocation was cent per cent for paddy promotion in Adat krishibhavan and so was the case in Arimpur krishibhavan in the year 2013-14. This shows the importance assigned to paddy cultivation.

The results of the trend analysis shows an irregular trend of the Union budget allocation for agriculture and allied sectors whereas the share allocated for paddy promotion programmes clearly shows a decreasing trend. And in all the three panchayats it was noted that more than half of the total allocation given for paddy promotion.

The study recommends that the government at all the levels should ensure stability and increment in allocation to the agricultural sector emphasizing the promotion of paddy cultivation. The government should ensure proper implementation and monitoring with a vision to make the state self- sufficient by increasing the production and productivity

4.2 COMPONENTS OF THE PADDY PROMOTION PROGRAMMES

The components of various paddy promotion programmes were delineated and are presented below.

4.2.1 Components of Centrally sponsored Schemes

4.2.1.1 Adat panchyat

Rashtriya Krishi Vikas Yojana (RKVY), MOU Rice development programme and Food security project were the main centrally sponsored schemes found operating in the areas under investigation for the specified time period.

RKVY was regularly implemented in all five years under study. The components of the scheme in 2011-2012 were assistance for 'increasing rice production in potential areas', 'organic farming' and its training. Only 'assistance for increasing rice production in potential areas', was implemented in 2012-13. In addition to assistance for increasing rice production in potential areas, the previous component organic farming was also added in 2013-14 and lime subsidy extended in 2014-15. During 2015-16, organic farming and lime subsidy were the main items considered. The physical achievements were **1117 ha, 793.26 ha, 1006 ha, 973.52 ha** and **1277.06 ha** and financial achievements were **₹ 15.67 lakhs, ₹ 23.80 lakhs, ₹ 69.56 lakhs, ₹ 47.15 lakhs** and **₹ 25.84 lakhs** respectively for five years from 2011-12 to 2015-16 for the study area in order.

MOU Rice development programme was implemented in 2011-12 and 2012-13, with financial achievement of **₹ 0.99 lakhs** and **₹ 5.62 lakhs** respectively. The components were demonstration and seed distribution in the former year and along with demonstration, distribution of seeds, plant protection chemicals included in the latter year.

State Food Security project was rolled out in 2011-12 and the component implemented under this was upland cultivation in 2.2 ha at the expense of **₹ 0.11 lakhs.**

Table 24: Components of Centrally sponsored schemes-Adat panchayat

Year	Sl.no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	1050 ha	14.31
			2)Organic farming	66 ha	1.32
			3)Organic farming training	1 No	0.03
			Total	1117 ha	15.67
	2	**MOU RICE**	1)Demonstration	13 No.s	0.32
			2) Seed distribution	13.40 t	0.67
			Total		0.99
	3	**State Food Security Project**	Upland cultivation	2.2 ha	0.11
2012-13	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	793.26 ha	23.80
	2	**MOU RICE**	1)Demonstration	5 No.s	0.12
			2) Seed distribution	10.02 t	0.50
			3) PPC	99 ha	4.00

			Total		5.62
2013-14	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	1006 ha	30.18
			2)Organic farming	164.8324 ha	21.43
			3) Lime	359 t (1025.71 ha)	17.95
			Total	2196.54 ha	69.56
2014-15		**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	973.52 ha	29.20
			2) Lime	359 t (1025.71 ha)	17.95
			Total	1999.23 ha	47.15
2015-16	1	**RKVY**	1)Organic farming	168.16 ha	6.73
			2) Lime	382.22 t (1108.90 ha)	19.11
			Total	1277.06 ha	25.84

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.1.2 Components of Centrally sponsored schemes – Arimpur panchayat

RKVY was continuously implemented in all the five years under study. The component –'assistance for increasing rice production in potential areas' was implemented in all these years. And only this component was implemented in the years 2014-15 and 2015-16 with physical achievements of **919.21 ha** and **939.72 ha** and financial achievements of **₹ 27.58 lakhs** and **₹ 42.20 lakhs**. In 2012-13 and 2013-14 the scheme had contract farming and organic farming as the component in addition to the major component. The physical achievements were **681.09 ha** and **910.94 ha** respectively. The financial achievements were **₹ 20.93 lakhs and ₹ 27.58 lakhs.** In 2011-12, there were different components under RKVY in addition to the major one, such as distribution of plant protection chemicals, lime, *Pseudomonas*, weedicide and documentation allowances. The financial achievement was **₹ 6.26 lakhs.**

Besides this, MOU Rice development scheme was implemented in 2011-12 and 2012-13. The components were seed, PPC, SRI demonstration, fertilizer, small farm mechanization, IPM etc. The financial target achieved was **₹ 1.79 lakhs**.

State food security project was also implemented in 2011-12 and the major components were fallow land cultivation, upland cultivation and Registered seed growers programme. The financial target achieved was **₹ 0.20 lakhs.**

Table 25: Components of Centrally sponsored Schemes – Arimpur panchayat

Year	Sl.no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	60.25 ha	0.48
			2)PPC	67.6 ha	0.32
			3) Lime	101.9 t	5.37
			4) *Pseudomonas*	0.1 t	0.03
			5) Herbicide	10 ha	0.05
			6) Documentation charges	1 No.	0.01
			Total		6.26
	2	**MOU RICE**	1)Minikit distribution	50 kits (5 kg per kit)	0.002
			2)PPC	66 ha	0.21
			3) SRI demonstration	1.6 ha	0.12
			4) fertilizer	6.148 ha	0.30
			5) Small farm mechanization	4 No.	0.02
			6) IPM (army worm)	69 ha	1.14
			Total		1.79
	3	**State Food Security Project**	1) Fallow land	1 ha	0.10
			2) Upland	2 ha	0.10

			3) RSGP	100 ha	
			Total		0.20
2012-13	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	678.73 ha	20.36
			2) Contract farming	2.36 ha	0.57
			Total	681.09 ha	20.93
	2	**MOU RICE**	1) Demonstration	3.6 ha	0.23
2013-14	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	909.34 ha	27.28
			2) Organic farming	1.6 ha	0.21
			Total	910.94 ha	27.49
2014-15		**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	919.21 ha	27.58
2015-16	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	939.72 ha	42.20

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.1.3 Components of Centrally sponsored schemes – Chelakkara panchayat

RKVY was regularly implemented in all five years under study. The component –'assistance for increasing rice production in potential areas' was implemented in all these years. And only this component was implemented in the years 2011-12,2014-15 and 2015-16 with physical achievements as **200 ha, 752 ha** and **579.91ha** and financial achievements as **₹ 1.68 lakhs, ₹ 22.56 lakhs** and **₹ 26.09 lakhs**. In 2012-13 and 2013-14 the scheme had contract farming and organic farming as the components in addition to the major component. The physical achievements were **681.09 ha** and **789.73 ha**. The financial achievements were **₹ 20.93 lakhs and ₹ 24.97 lakhs.**

Besides this, MOU Rice development scheme was implemented in 2011-12 and 2012-13. The components were distribution of seeds, PPC, SRI demonstration, Farmer Field School, distribution of micro nutrients, Registered Seed Growers Programme, demonstrations and trainings. The financial target achieved was **₹ 1.79 lakhs** and **₹ 1.34 lakhs**. State food security project was also implemented in 2011-12 and the major components were fallow land cultivation, upland cultivation .The financial target achieved was **₹ 2.28 lakhs.**

RKVY was found to be the only centrally sponsored scheme that has been implemented continuously for the five years considered for the study. The major component was 'assistance for increasing rice production in potential areas' with major share of physical and financial achievements.

Table 26: Components of Centrally sponsored schemes – Chelakkara panchayat

Year	Sl.no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	200 ha	10.00
	2	**MOU RICE**	1) Demonstration	1.2 ha	0.08
			2) HYV Seed @ Rs.5/ Kg	11.48 t	0.57
			3) Micronutrients @ Rs. 500/ ha	15 ha	0.08
			4) SRI @ Rs. 3000/ Acre	1.2 ha	0.09
			5) Incentive for Lime @ Rs. 500/ ha	94 ha	0.47
			6) PPC @ Rs. 500/ ha	45 ha	0.22
			7) FFS @ Rs. 17000/ Training	1 No.	0.17
			Total		1.68
	3	**State Food Security Project**	1) Fallow land	0.41 ha	0.04
			2) Upland	1.87 ha	0.09
			Total		
2012-13	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	678.73 ha	20.36
			2) Contract farming	2.36 ha	0.57

			Total	681.09 ha	20.93
	2	**MOU RICE**	1)Demonstration	2.5 ha	0.13
			2) HYV Seed @ Rs.5/ Kg	10 t	0.50
			3) Micronutrients @ Rs. 500/ ha	10 ha	0.05
			4) SRI @ Rs. 3000/ Acre	1.2 ha	0.09
			5) Incentive for Lime @ Rs. 500/ ha	72 ha	0.36
			6) PPC @ Rs. 500/ ha	8.435 ha	0.04
			7) FFS @ Rs. 17000/ Training	1 No.	0.17
			8) RSGP	15 ha (10270 Kg)	
			Total		1.34
2013-14	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	785 ha	23.55
			2) Organic farming	4.73 ha	1.42
			Total	789.73	24.97
2014-15		**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	752 ha	22.56
2015-16	1	**RKVY**	1) Increasing rice production in potential rice growing tract of Kerala	579.91 ha	26.09

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.2. Components of State schemes

4.2.2.1 Components of State schemes- Adat panchayat

Sustainable Development of Rice (SDR) project was implemented with an objective to enhance the production and productivity of rice and to sustain rice cultivation by increasing productivity.

Major component of the scheme which was implemented in all the five years of study was 'Revitalization of group farming'. This component promoted group based activities like mechanization of tillage, transplanting and harvesting, use of uniform seeds identified as HYV seeds for each *padasekharam*, pre-planned sowing, integrated nutrient and pest management, harvesting and post-harvest management.

In 2011-12, SDR was rolled out and the component implemented in Adat was 'Revitalization of group farming'. It covered an area of **694.6 ha** and the financial achievement was **₹ 10.02 lakhs.**

In 2012-13, two components of the scheme were implemented namely 'Revitalization of group farming' (₹ 4000/ ha) and Upland cultivation (₹ 7500/ ha). The scheme covered an area of **150.41 ha** at the expense of **₹ 6.03 lakhs.**

Two schemes were implemented in Adat during 2013-14, SDR and ATMA and ATMA plus. Under SDR, the major components implemented were 'Revitalization of group farming' (₹ 1500/ ha), Upland cultivation (₹ 7500/ ha) and Operational support to *padasekharams* (₹ 200/ ha). The scheme covered an area of **1106.56 ha** at the expense of **₹16.10 lakhs.**

Under ATMA and ATMA plus farmer field schools, training under pest surveillance, demonstration and exposure visits were conducted. An amount of **₹ 0.67 lakhs** was spent.

Thereafter in 2014-15 and 2015-16, SDR was implemented with two components each, namely 'Revitalization of group farming' (₹ 1500/ ha) and Operational support to *padasekharams.* The physical achievements were **1073.55 ha** and **1120.35 ha** while financial achievements were **₹14.80 lakhs** and **₹ 15.50 lakhs** respectively.

In addition to SDR, under ATMA and ATMA plus farmer field school and demonstrations were conducted. The financial achievement recorded was **₹ 0.37 lakhs.**

Table 27: Components of State schemes- Adat panchayat

Year	Sl. no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**Sustainable Development of Rice**	1) Revitalization of group farming	694.6 ha	10.02
2012-13	1	**Sustainable Development of Rice**	1) Revitalization of group farming	150.01 ha	6.00
			2) Upland	0.4 ha	0.03
			Total	150.41 ha	6.03
2013-14	1	**Sustainable Development of Rice**	1) Revitalization of group farming	1006 ha	15.86
			2) Operational support to *padasekharam*	100 ha	0.20
			3) Upland	0.56 ha	0.04
			Total	1106.56 ha	16.10
	2	**ATMA and ATMA PLUS**	1) Farmer field school	6 No.s	0.34
			2) Training under pest surveillance	1. No	0.17
			3) Demonstration	2 No.s	0.10
			4) Exposure visit	1 No.	0.06
			Total		0.67
	1		1) Revitalization of group farming	973.55 ha	14.60

2014-15		**Sustainable Development of Rice**	2) Operational support to *padasekharam*	100 ha	0.20
			Total	1073.55 ha	14.80
2015-16	1	**Sustainable Development of Rice**	1) Revitalization of group farming	1020.35 ha	15.30
			2) Operational support to *padasekharam*	100 ha	0.20
			Total	1120.35 ha	15.50
	2	**ATMA and ATMA PLUS**	1) Farm field school	6 No.s	0.34
			2) Demonstration	4 No.s	0.03
			Total		0.37

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.2.2 Components of State schemes – Arimpur panchayat

Arimpur panchayat had implemented Sustainable Development of Rice scheme as well as ATMA and ATMA plus under State scheme.

SDR rolled out in 2011-12 had three components namely revitalization of group farming, fallow land cultivation, distribution of supplementary income through cowpea cultivation. The physical and financial achievements under the scheme were **1213 ha** and **₹ 21.95 lakhs** respectively.

The ATMA and ATMA plus conducted demonstrations and exposure visits at the expense of **₹ 0.31 lakhs.**

In 2012-13, the SDR implemented had revitalization of group farming, upland cultivation 'Panchayat Level Perspective Programme for Sustainable Rice Development Initiative' (PPPSRI) and documentation as components. The physical and financial achievements were **767.05 ha** and **₹ 4.81 lakhs** respectively. The ATMA scheme implemented had only farmer field school as its component and the financial achievement was **₹ 0.17 lakhs**.

In 2013-14 only SDR was carried out and had covered **1725.74 ha** and **₹ 138.06 lakhs** with three components i.e., revitalization of group farming, operational support to *padasekharams* and upland cultivation.

In 2014-15, revitalization of group farming and operational support to *padasekharams* under SDR and farmer field school, demonstrations and exposure visits were executed under ATMA and ATMA plus. SDR covered1871.21 ha area and an amount of **₹ 15.69 lakhs.** Under ATMA only **₹ 0.16 lakhs** was achieved.

SDR implemented in 2015-16 had two components *viz;* revitalization of group farming and operational support to *padasekharams* and farmer field school under

ATMA and ATMA plus. SDR was laid out in 1901.74 ha at the expense of **₹ 15.99 lakhs** and for ATMA and ATMA plus, it was **₹ 0.03 lakhs.**

Table 28: Components of State schemes- Arimpur panchayat

Year	Sl. no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**Sustainable Development of Rice**	1) Revitalization of group farming	1135 ha	16.63
			2) Fallow land	8 ha	3.57
			3) Supplementary income (cowpea)	70 ha	1.75
			Total	1213 ha	21.95
	2	**ATMA and ATMA PLUS**	1) Demonstration	5 Nos.	0.20
			2) Exposure visit	1 No.	0.11
			Total		0.31
2012-13	1	**Sustainable Development of Rice**	1) Revitalization of Group farming	48.19 ha	1.83
			2) Upland	1 ha	0.07
			3) PPPSRI	717.86 ha	2.88
			4) Documentation	1 No	0.03
			Total	767.05 ha	4.81
	2	**ATMA and ATMA PLUS**	1) Farm field school	1 No	0.17
2013-14	1	**Sustainable Development of Rice**	1) Revitalization of group farming	909.34 ha	136.40
			2) Operational support to *padasekharam*	816 ha	1.63
			3) Upland	0.4 ha	0.03

			4) Fallow less panchayat	1.33 ha	0.41
			5)PPPSRI	642.9 ha	7.79
			6) Documentation	1 No	0.05
			Total		146.31
	2	**ATMA and ATMA PLUS**	1) Farm field school	1 No	0.34
2014-15	1	**Sustainable Development of Rice**	1) Revitalization of group farming	919.21 ha	13.79
			2) Operational support to *padasekharam*	952 ha	1.90
			Total		15.69
	2	**ATMA and ATMA PLUS**	1) Farm field school	1 No	0.03
			2) Demonstration	1 No	0.005
			3) Exposure visit	2 Nos	0.16
2015-16	1	**Sustainable Development of Rice**	1) Revitalization of group farming	939.74 ha	14.07
			2) Operational support to *padasekharam*	962 ha	1.92
			Total		15.99
	2	**ATMA and ATMA PLUS**	1) Farm field school	1 No.	0.03

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.2.3 Components of State schemes- Chelakkara panchayat

Sustainable Development of Rice was implemented for all five years of study period. The physical and financial targets achieved was **785.92 ha, 242.93 ha, 1285.83 ha, 755.5 ha and 994.63 ha** area and **₹ 12.03 lakhs, ₹ 3.82 lakhs, ₹ 12.83 lakhs, ₹ 11.68 lakhs** and **₹ 6.94 lakhs** respectively from 2011- 12 to 2015-16. In addition to the major component – revitalization of rice which was implemented in all five years, in 2011-12 and 2014-15 fallow land cultivation was practised. Upland cultivation was carried out in 2012-13, and in 2013-14 operational support to *padasekharams* was also added up. In 2015-16, operational support, fallow land cultivation and upland cultivation were also practised.

In 2014-15 and 2015-16 under ATMA and ATMA plus demonstrations were conducted and the financial achievements were **₹ 0.04 lakhs** and **₹ 0.10 lakhs** respectively.

SDR and ATMA were the two schemes implemented under State schemes. Under SDR 'revitalization of group farming' component was implemented in every year and this component showed maximum physical and financial achievements. In case of ATMA Farmer field school was the important component.

Table 29: Components of State schemes- Chelakkara panchayat

Year	Sl.no	Scheme	Component	Physical achievement	Financial achievement (in lakh rupees)
2011-12	1	**Sustainable Development of Rice**	1) Revitalization of group farming @ 1500/ ha	779 ha	11.68
			2) Fallow land @ 5000/ ha	6.92 ha	0.35
			Total	785.92 ha	12.03
2012-13	1	**Sustainable Development of Rice**	1) Revitalization of group farming	240 ha	3.60
			2) Upland	2.93 ha	0.22
			Total	242.93 ha	3.82
2013-14	1	**Sustainable Development of Rice**	1) Revitalization of group farming	785 ha	11.77
			2) Operational support to *padasekharam*	500 ha	1.00
			3) Upland	0.83 ha	0.06
			Total	1285.83 ha	12.83
2014-15	1	**Sustainable Development of Rice**	1) Revitalization of group farming	752 ha	11.28
			2) Fallow land	3.5 ha	0.40
			Total	755.5 ha	11.68

	2	**ATMA and ATMA PLUS**	1) Demonstration	0.4 ha	0.04
	1	**Sustainable Development of Rice**	1) Revitalization of group farming	171.03 ha	2.56
			2) Operational support to *padasekharam*	618 ha	1.24
			3) Fallow land	205 ha	3.08
			4) Special rice	0.6 ha	0.06
			Total	994.63 ha	6.94
2015-16					
	2	**ATMA and ATMA PLUS**	1) Demonstration	0.4 ha	0.10

Source: Compiled data (from 2011-12 to 2015-16) from scheme register maintained at Krishibhavan

4.2.3 Components of schemes under decentralized planning –

4.2.3.1 Components of paddy promotion schemes under decentralized planning- Adat panchayat

With an urge to boost the production and productivity of paddy Comprehensive organic based rice development project was implemented in 2011-12 and the components as mentioned in the table were distribution of:

a) Seeds
b) Production enhancing materials
c) Organic manures
d) Pseudomonas/ Trichoderma
e) Sprayers
f) Bio plant protectors

The total fund allotted for the project was **₹ 20.24 lakhs** (excluding the beneficiary share) and 89.92 per cent of the financial target was achieved and an amount of **₹ 2.04 lakhs** was carried over to next financial year.

In 2012-13 the same scheme was repeated after clubbing with RKVY with an objective to make available high yielding variety seeds to **950 ha** *kole* lands and **782.90 t** seeds were distributed with a total fund of **₹ 27.37 lakhs** excluding beneficiary share. Out of which **₹ 18 lakhs** was central share and the scheme achieved almost 100 per cent target set.

The project was implemented in 2013-14 after merging with RKYV with an objective to distribute high yielding variety seeds to **950 ha** *kole* lands. Under this scheme **760 t seeds** were distributed with a financial outlay of **₹ 30 lakhs** of which **₹ 18 lakhs** was of central contribution. The scheme was successful in achieving cent per cent target.

Comprehensive organic based paddy promotion programme was implemented as a two-year programme project in 2014-15, which was continued in 2015-16 also. The objective was to give assistance to the expense incurred in cultivation of paddy in **1000 ha**. A total of **₹ 36.50 lakhs** was allotted for two years of which **₹16.5 lakhs** was for 2014-15 and **₹ 20 lakhs** was for utilization in 2015- 16.

In addition to this in 2015 -16 under paddy cultivation an amount of **₹ 1.15 lakhs** was outlaid as assistance to SC youth with an objective to cover **25 ha** area. Due to lack of fund the scheme achieved only 66.38 per cent of its target.

Table 30: Components of schemes under decentralized planning – Adat panchayat

Year	Sl. no	Scheme	Component	Physical		Financial (in lakh rupees)		Spill Over	Percentage
				Target	achievement	Target	Achievement		
2011-12	1	**Comprehensive organic based rice development project**	1) Seed distribution	90 t		20.24	18.20	2.04	89.92
			2) Production enhancing materials	50 t					
			3) Organic manure	50 t					
			4) *Pseudomonas, Trichoderma*	1 t					
			5) Sprayers	20 Nos.					
			6) Bio plant protectors	50 Ha					
2012-13	1	**Comprehensive organic based rice development project**	Seed distribution	782.90 t		27.37	27.36	0.01	99.96
2013-14	1	**Comprehensive organic based rice development project**	Seed distribution	760 t 950 ha	760t	30.00	30.00	0	100

					950 ha				
2014-15	1	**Comprehensive organic based rice development project** (2 yr project)	Assistance to meet expense in labour cost	1000 ha		16.50	16.50		100
2015-16	1	**Comprehensive organic based rice development project**	Assistance to meet expense in labour cost	1000 ha		20.00	20.00	0	100
	2	**Paddy cultivation assistance to SC youth**	Assistance to meet expense in labour cost	25.7 ha	25.7 ha	1.16	0.77	0.39	66.38

Source: Compiled data from scheme register maintained at Krishibhavan and Sulekha (2017)

4.2.3.2 Components of paddy promotion schemes under decentralized planning – Arimpur panchayat

'Distribution of high yielding variety paddy seeds' was the main and only scheme implemented under decentralized planning in Arimpur panchayat.

In 2012-13, in addition to the seed component, distribution of sprayers was also done. The scheme was framed with an objective to distribute **75 t of seeds** and **100 sprayers** and an outlay of **₹ 12.5 lakhs.** But the project was spilled over and was considered again in next year due to lack of adequate number of beneficiary claims within the stipulated time. Therefore the scheme attained only 16.99 per cent of the set target and an amount of **₹ 10.37 lakhs** was carried over to the subsequent financial year.

The scheme was implemented in 2013-14 with an objective to supply **80 t of seeds** to the farmers with a financial outlay of **₹ 13.5 lakhs.** Along with this the previous year spill over was also implemented.

In 2014-15 and 2015-16, the scheme achieved cent per cent target with the same physical and financial outlay of **₹ 12.82 lakhs and ₹ 20.97 lakhs respectively.**

Table 31: Components of schemes under decentralized planning – Arimpur panchayat

Year	Sl.no	Scheme	Component	Physical		Financial (in lakh rupees)		Spill over	Percentage
				Target	achievement	Target	Achievement		
2011-12		NA*							
2012-13	1	**Distribution of high yielding variety paddy seed & sprayer**	1) Seed distribution	75 t		12.50	2.12	10.38	16.99
			2) Sprayer	100 Nos.					
2013-14	1	**Distribution of high yielding variety paddy seed**	1) Seed distribution	80 t	80 t	13.50	13.50	0	100
2014-15		**Distribution of high yielding variety paddy seed**	1) Seed distribution	80 t	80 t	12.82	12.82	0	100
2015-16		**Distribution of high yielding variety paddy seed**	1) Seed distribution	80 t	80 t	20.97	20.97	0	100

Source: Compiled data from scheme register maintained at Krishibhavan and Sulekha (2017) NA* Not available

4.2.3.3 Components of paddy promotion schemes under decentralized planning-Chelakkara panchayat

With an objective to cover 600 ha of paddy land and thereby to increase production and productivity of paddy, Comprehensive Paddy Development scheme was implemented in 2011-12 in Chelakkara panchayat and the major components were distribution of :

a) Paddy seed
b) *Pseudomonas* and micro nutrients
c) Organic manure
d) Chemical fertilizer
e) Knapsack sprayer

A total amount of **₹14 lakhs** was allotted and 99.4 per cent achievement was achieved.

In 2012-13 'Distribution of seed, labour cost and Knapsack sprayer for paddy cultivation' scheme was implemented.

A total outlay of ₹ 14.4 lakhs was outlined. But only 59.80 per cent of the set target was attained and the remaining amount was carried over to the subsequent year.

'Distribution of seed, organic manure, chemical fertilizer & green manure seed for paddy cultivation' scheme was rolled out in 2013-14.

A total outlay of **₹18.6 lakhs** was allocated and the scheme achieved 96.06 per cent of the set target.

In 2014-15, the scheme 'Distribution of seed, Organic manure and Chemical Fertilizer for paddy cultivation' scheme was implemented.

The total amount assigned was **₹ 18 lakhs** and the scheme achieved 96.95 per cent financial target.

In addition to this another scheme 'Distribution of Knapsack sprayer and weed cutter for individuals' was carried out. In this, the knapsack sprayers were exclusively distributed to paddy farmers through *padashekara samithis*. An amount of **₹ 2.64 lakhs** was assigned for the project of which **₹ 0.44 lakhs** was outlaid for Knapsack sprayer distribution, out of which only 61 per cent target was achieved, whereas the scheme as a whole attained 93.51 per cent of the set target.

In 2015-16, the scheme 'Distribution of seed, Organic manure, Chemical Fertilizer & pesticides for paddy cultivation' scheme was implemented.

A total amount of **₹ 20.39 lakhs** was allotted and 100 per cent achievement was achievement.

In all the three panchayats, seed distribution was found to be an inevitable component and this component covered the maximum physical and financial target set.

Table 32: Components of schemes under decentralized planning – Chelakkara panchayat

Year	Sl.no	Scheme	Component	Physical		Financial (in lakh rupees)		Spill Over	Percentage
				Target	Achievement	Target	Achievement		
2011-12	1	**Comprehensive rice development project**	1) Seed distribution	600 ha		14.00	13.92	0.08	99.42
			2) Pseudomonas, micro nutrients						
			3) Organic manure						
			4) Chemical fertilizer						
			5) Knapsack sprayer						
2012-13	1	**Distribution of seed, labour cost and Knapsack sprayer for paddy cultivation**	1) Seed distribution	57 t		14.40	8.61	5.79	59.80
			2) Assistance to meet labour cost	270 ha					
			3) Sprayer	25 Nos.					
2013-14	1	**Distribution of seed, Organic manure, Chemical Fertilizer & Green manure seed for paddy cultivation**	1) Paddy seed distribution	500 ha		18.60	17.87	0.73	96.06
			2) Organic manure	75 t					
			3) Chemical fertilizer	500 ha					
			4) Green manure seed						
		Distribution of seed, Organic manure &	1) Paddy seed distribution	500 ha				0.55	

2014-15	1	**Chemical Fertilizer for paddy cultivation**	2) Organic fertilizer	75 t		18.00	17.45		96.95
			3) Chemical fertilizer	500 ha					
	2	**Distribution of Knapsack sprayer and weed cutter for individuals**	1) Knapsack sprayer	44 No.s		2.64	2.47	0.17	93.51
			2) Weed cutter	45 No.s					
2015-16	1	**Distribution of seed, Organic manure, Chemical Fertilizer & pesticides for paddy cultivation**	1) Paddy seed distribution	500 ha	500 ha	20.39	20.39	0	100
			2) Organic fertilizer	60 t	60 t				
			3) Chemical fertilizer	500 ha	500 ha				
			4) Pesticides	300 ha	300 ha				

Source: Compiled data from scheme register maintained at Krishibhavan and Sulekha (2017)

4.2.4 Beneficiary share in schemes under decentralized planning

4.2.4.1 Adat panchayat

The Table 33 reveals that the beneficiary share was 43.50 per cent in 2011-12. In 2012-13 and 2013-14, distribution of the seed was the only component and the beneficiary share was 88.35 and 76.00 per cent respectively. In 2014-15 and 2015-16 'assistance to the expense incurred in labour cost' was the only component and its beneficiary 64.52 and 50 per cent respectively. The beneficiary share shows an increasing trend till 2012-13, where it is 88. 35 per cent and there after it reduces to 50 per cent by 2015- 16.

In case of paddy cultivation assistance to SC youth, the beneficiary share was found to be 83.33 per cent.

4.2.4.2 Arimpur panchayat

The Table 35 indicates an increase in the beneficiary share in case of 'distribution of High yielding variety seeds' till 2014-15 and then it decreases.

4.2.4.2 Chelakkara panchayat

The Table 36 shows decreasing beneficiary share of 'Comprehensive rice development project' from 49.95 per cent to 37. 98 per cent.

It can be observed from the Table 37 that the scheme distribution of seed, organic manure, chemical fertilizer, green manure, pesticides shows a slight varying trend in the beneficiary share as 46.78 per cent, 46.67 per cent and 47. 26 per cent in 2013-14, 2014-15 and 2015-16 respectively.

The Table 38 shows that the beneficiary share were 50 per cent and 75 per cent for Knapsack sprayer and weed cutter respectively.

It can be concluded that all the panchayats are taking efforts to reduce the beneficiary share year after year.

Beneficiary share in schemes under decentralized plan

Table 33: Comprehensive organic based rice development project (Adat)

Sl.No	Name of scheme	2011-2012	
		TO	BS
I	**Comprehensive organic based rice development project (Adat)**		
1	Seed distribution	23.40	9.36 (40%)
2	Distribution of production enhancing items	4.00	2.00 (50%)
3	Organic manure/ Neem cake	7.00	3.50 (50%)
4	Pseudomonas, Trichoderma	0.50	0.25 (50%)
5	Sprayers	0.40	0.20 (50%)
6	Bio plant protectors	0.50	0.25 (50%)
	Total	35.80	15.56 (43.5%)

Source: Compiled data from scheme register, Sulekha (2017)

TO- Total Outlay & BS- Beneficiary Share (in lakh rupees)

Table 34: Paddy cultivation assistance to SC youth (Adat)

Sl.No	Name of scheme	2015-2016	
		TO	BS
II.	Paddy cultivation assistance to SC youth (Adat)		
1	Assistance to meet expense incurred in labour cost	6.94	5.78
	Total	6.94	5.78 (83.33)

Source: Compiled data from scheme register, Sulekha, (2017) **TO- Total Outlay & BS- Beneficiary Share (in lakh rupees)*

Table 35: Distribution of High yielding variety paddy seed (Arimpur)

Sl. No	Name of scheme	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
		TO	BS	TO	BS	TO	BS	TO	BS	TO	BS
I.	Distribution of High yielding variety paddy seed (Arimpur)										
1	Seed distribution		*			22.40	8.90 (39.73)	32.00	19.18 (59.94%)	32.00	11.03 (34.45)
	Total			20.35	7.85 (38.57%)	22.40	8.90 (39.73)	32.00	19.18 (59.94%)	32.00	11.03 (34.45)

Source: Compiled data from scheme register, Sulekha (2017) *TO- Total Outlay & BS- Beneficiary Share (in lakh rupees)* * Not available

Table 36: Comprehensive rice development project (Chelakkara)

Sl.No	Name of scheme	2011-2012		2012-2013	
		TO	BS	TO	BS
I	**Comprehensive rice development project (Chelakkara)**				
1	Seed distribution	11.73	5.85 (49.87%)	12.55	8.34 (66.48%)
2	Pseudomonas, micro nutrients Organic manure	8.30	4.15 (50%)	**	
4	Chemical fertilizer	6.92	3.46 (50%)		
5	Knapsack sprayer	1.08	0.54 (50%)	0.95	0.48 (50%)
6	Assistance to labour cost incurred	**		9.72	0 (0%)
	Total	28.03	14.00 (49.95 %)	23.22	8.82 (37.98%)

Source: Compiled data from scheme register **TO- Total Outlay & BS- Beneficiary Share (in lakh rupees)* *** Not applicable*

Table 37: Distribution of seed, organic manure, chemical fertilizer, green manure

Sl.No	Name of scheme	2013-2014		2014-2015		2015-2016	
		TO	BS	TO	BS	TO	BS
II	**Distribution of seed, organic manure, chemical fertilizer, green manure**						
1	Paddy seed distribution	9.00	4.50 (50%)	9.00	4.50 (50%)	15.05	9.22 (61.29%)
2	Organic manure	12.75	5.25 (41.17%)	12.75	5.25 (41.17%)	12.00	3.00 (25%)
3	Chemical fertilizer	12.00	6.00 (50%)	12.00	6.00 (50%)	10.22	5.35 (52.39%)
4	Green manure seed	1.20	0.60 (50%)	**			
5	Pesticides	**				1.41	0.70 (50%)
	Total	34.95	16.35 (46.78)	33.75	15.75 (46.67%)	38.68	18.28 (47.26%)

Source: Compiled data from scheme register *TO- Total Outlay & BS- Beneficiary Share (in lakh rupees)* *** Not applicable*

Table 38: Distribution of knapsack sprayer and weed cutter

Sl.No	Name of scheme	2014-2015	
		TO	BS
III.	**Distribution of Knapsack sprayer and weed cutter**		
1	Knapsack sprayer	0.88	0.44 (50%)
2	Weed cutter	8.80	6.60 (75%)
	Total	9.68	7.04 (72.72%)

Source: Compiled data from scheme register

4.3 STAGES OF SCHEME FORMULATION AND IMPLEMENTATION

The different stages of scheme implementation were listed out and most influencing stages were identified and then ranked as perceived by the implementing officers

Table 39: Stages of scheme formulation and implementation

(n=30)

Sl no.	Stages	Centrally and State sponsored schemes		Schemes under decentralized planning	
		Factor index	Rank	Factor Index	Rank
1	Planning	**		86.67	4
2	Implementation	73.70	2	88.35	3
3	Monitoring	68.33	3	91.00	2
4	Evaluation	81.25	1	93.33	1

Source: Compiled from primary data ** Planning stage is with respect to the schemes under decentralized planning

The results Table 39 indicates that under decentralized planning, evaluation stage, followed by monitoring, implementation and planning stages were perceived as most influential whereas in case of Central and State sponsored schemes evaluation, implementation and monitoring were the most influential stages. The results are presented in the descending order of their influence on successful scheme implementation. Monitoring, evaluation and identification of factors that affected the implementation of the scheme are most important for rectifying existing flaws and to further plan and formulate a flawless and effective project.

4.3.1 Factors affecting the planning stage

Planning is a process in public governance that analyses the situation, identifies the needs, sets the priorities, allocates the resources and fixes the targets for achieving the pre-determined objectives. Preparation of a comprehensive plan may not guarantee success, but lack of a sound plan will almost certainly ensure failure. With this view, the factors affecting the planning stage of the schemes under decentralized planning was identified.

Table 40: Factors affecting the planning stage

(n=30)

Sl no.	Factors affecting planning	Schemes under decentralized planning	
		Factor Index	Rank
1	Formulation of projects	98.33	1
2	Selection of beneficiaries	95	2
3	Output assessment	93.33	3
4	Fund requirement	91.67	4
5	Labour budgeting	55	5

Source: Compiled from primary data * Planning stage is with respect to the schemes under decentralized planning

Table 40 reveals that formulation of the project is the most important factor, followed by selection of beneficiaries, output assessment and the fund requirement for the scheme execution. It can be noted that even though labour budgeting is an important factor, it has been ranked as the least affecting factor, since it is not practised generally.

4.3.2 Factors influencing implementation

The implementation phase is often the most gratifying phase, where the work actually gets done. The success of a Plan lies in the effectiveness with which the projects and programmes are executed and the efficiency and productivity levels at which various enterprises operate. Considering all this, the factors affecting implementation were found out and the results obtained are furnished below for discussion:

Table 41: Factors influencing implementation of programmes (Major dimensions)

(n=30)

Sl no.	Factors influencing implementation	Centrally and State sponsored schemes		Schemes under decentralized planning	
		Factor index	Rank	Factor Index	Rank
1	Leadership style and management approach of extension personnel	71.00	4	87.00	4
2	Resource perspective	77.96	1	89.44	1
3	Beneficiary perspective	71.39	3	88.05	3
4	Scheme features	74.44	2	88.89	2

Source: Compiled from primary data

Resource aspects were perceived as the most influencing factor, followed by scheme features, beneficiary aspects and leadership style and management approach of extension personnel in both cases of central and state schemes as well as schemes under decentralized planning.

Table 42: Factors influencing implementation of programmes (Sub-dimensions)

(n=30)

Sl no.	Factors influencing implementation	Centrally and State sponsored schemes		Schemes under decentralized planning	
		Factor index	Rank	Factor Index	Rank
1	**Leadership style and management approach of extension personnel**	**71.00**	**4**	**87.00**	**4**
	a) Adherence to time schedule	86.67	2	90.00	2
	b) Adherence to scientific implementation	60.00	4	86.67	3
	c) Adherence to government orders	96.67	1	93.33	1
	d) Experience of Officers	65.00	3	83.33	4
	e) Availability of Officers	46.67	5	81.67	5
2	**Resource perspective**	**77.96**	**1**	**89.44**	**1**
	a) Timely release of fund	91.67	1	100.00	1
	b) Timely availability of inputs	83.33	3	98.33	2
	c) Timely technical support	73.33	5	90.00	4
	d) Adequate quantity of inputs	91.67	1	100.00	1
	e) Quality of the inputs supplied	90.00	2	96.67	3
	f) Availability of institutional facilities	78.33	4	83.33	6

	g) Storage life of inputs	60.00	8	71.67	8
	h) Availability of storage facilities for inputs supplied	63.33	7	80.00	7
	i) Transportation cost involved	70.00	6	85.00	5
3	**Beneficiary perspective**	**71.39**	**3**	**88.05**	**3**
	a) Coordination among members of *padashekara samithi*	90.00	1	98.33	1
	b) Leadership in effective management of programmes	73.33	2	96.67	2
	c) Improved group dynamics among the members in *padashekara samithi*	71.67	3	91.67	3
	d) Personal conflicts among the members	70.00	4	78.33	5
	e) Political interventions leading to conflicts	55.00	6	73.33	6
	f) Knowledge on Paddy promotion programmes	68.33	5	90.00	4
4	**Scheme features**	**74.44**	**2**	**88.89**	**2**
	a) Inclusion of all sectors of farmers	68.33	2	90.00	2
	b) Trainings given for beneficiaries	65.00	3	85.00	3
	c) Subsidy given	90.00	1	91.67	1

Source: Compiled from primary data

Among various resource aspects, the Officers perceived timely release of fund, input and technical assistance, the quality and quantity of the input supplied as the most affecting factors. Availability of institutional facilities, storage facility and storage life of the inputs as well as the transportation cost involved were considered as moderately influencing factors.

Regarding features of Centrally and State sponsored schemes the factors identified in the order of their importance were percentage of subsidy given under each scheme, trainings conducted and the inclusion of farmers belonging to all the categories. Whereas in case of factors affecting schemes under decentralized planning all three of the factors were equally important.

Coordination among the beneficiaries, leadership exhibited in effective management of programmes, interest and knowledge of the farmers were the factors relating to the beneficiaries. Whereas, adherence to government orders and time schedule, scientific implementation, experience of the officers and manpower availability were the aspects related to the implementing Officers.

It can be summarized that resource aspects and the scheme features were mostly acted as the success factors of the implemented scheme though in varying degree. It can be viewed from the factor indices available in the Table 40 that the factors identified have more implication on the schemes under decentralized planning since they are need based, involving farmer participation and utilizing locally available resource.

Table 43: Result of t test for factors influencing implementation

Sl.no	Factors influencing implementation	Mean	t- value
1	Central and State sponsored schemes	74.28	4.3**

2	Schemes under decentralized planning	88.48	

** *Significance at 5 per cent*

Reiterating the factors influencing implementation, t –test results showed a significant difference in case of implementation of Centrally and State sponsored schemes and schemes under decentralized planning.

H_0: The factors influencing the implementation of Central and State sponsored schemes and that of the schemes under decentralized planning are same.

H_a: The factors influencing the implementation of Central and State sponsored schemes and that of the schemes under decentralized planning are not the same.

Since the P value (0.00) is less than 0.05, the alternate hypothesis is accepted which means that the factors influencing the implementation in both cases are significantly different.

The higher mean value supports the actual cause of decentralized planning i.e., to address the location specific issues by utilizing locally available resource factors and formulating issue addressing specific programme with the help of beneficiaries and officers. It indicates that the identified factors, therefore have higher effect on schemes implementing at local level than at State or Central level.

In the study conducted by Geetha (2002), it was found that according to the officials' lack of cooperation among the farmers within *Thozhilsena*, political interference, lack of mutual trust and sincerity of members were the most influential factors that decided the success of the initiative.

Delay in project implementation not only affect their contributions to the economic growth and result in the wastage of scarce resources but also lead to a

reduction in the employment potential to be generated on the completion of these projects. The timely completion of agricultural programmes are important for improving the production performance (SPB, 1989)

4.3.3 Factors affecting the monitoring stage

Monitoring is a process of continuous and periodic surveillance of the physical implementation of a programme, through timely gathering of systematic information on work schedules, inputs delivery, targeted outputs, and other variables of the programme, in order to have the desired effects and impact. The factors affecting the monitoring stage were delineated and ranked based on the priority perceived by the implementing officers.

Table 44: Factors affecting the monitoring stage

(n=30)

Sl no.	Factors affecting monitoring	Centrally and State sponsored schemes		Schemes under decentralized planning	
		Factor index	Rank	Factor Index	Rank
1	Adherence to monitoring interim schedule	75.00	2	88.33	4
2	Monitoring physical achievement	73.33	3	95.00	1
3	Monitoring financial achievement	85.00	1	90.00	3
4	Reporting of progress	50.00	5	88.33	4
5	Rectifying problems	58.33	4	93.33	2

Source: Compiled from primary data

Table 44 indicates that monitoring the physical achievement was opined as the most affecting factor followed by rectifying the problems, monitoring of the financial achievement, adherence to the monitoring interim schedule and reporting of the progress.

Table 45: Result of t test for factors influencing monitoring

Sl.no	Factors influencing monitoring	Mean	t- value
1	Central and State sponsored schemes	68.33	3.5**
2	Schemes under decentralized planning	98.00	

** *Significance at 5 per cent*

Results of t-test showed a significant difference in case of monitoring of Centrally and State sponsored schemes and schemes under decentralized planning.

H_0: The factors influencing the monitoring of Central and State sponsored schemes and that of the schemes under decentralized planning are same.

H_a: The factors influencing the monitoring of Central and State sponsored schemes and that of the schemes under decentralized planning are not the same.

Since the P value (0.008) is less than 0.05, the alternate hypothesis is accepted which means that the factors influencing the monitoring in both cases are significantly different.

The higher mean value indicates that the identified factors, therefore have higher effect on schemes implementing at local level than at State or Central level.

4.3.4 Factors affecting evaluation

Evaluation is the systematic and objective assessment of an on-going or completed project, programme, or policy, and its design, implementation and results. The aim is to determine the relevance and fulfillment of objectives, development efficiency, effectiveness and impact.

Table 46: Factors affecting evaluation

(n=30)

Sl no.	Factors affecting evaluation	Centrally and State sponsored schemes		Schemes under decentralized planning	
		Factor index	Rank	Factor Index	Rank
1	Assessment of physical achievement	85.00	2	98.33	1
2	Assessment of financial achievement	93.33	1	93.33	2
3	Completion of project on time	80.00	3	88.33	3
4	Follow up of implemented schemes	66.67	4	93.33	2

Source: Compiled from primary data

The results in Table 46 reveal that assessment of physical and financial achievements are the most critical factors followed by timely completion of the project and follow up of the implemented schemes.

Table 47: Result of t-test for factors influencing evaluation

Sl.no	Factors influencing evaluation	Mean	t- value
1	Central and State sponsored schemes	81.25	2.0*
2	Schemes under decentralized planning	93.33	

*Significance at 10 per cent

Results of t-test showed a significant difference in case of evaluation of Centrally and State sponsored schemes and schemes under decentralized planning.

H_0: The factors influencing the evaluation of Central and State sponsored schemes and that of the schemes under decentralized planning are same.

H_a: The factors influencing the evaluation of Central and State sponsored schemes and that of the schemes under decentralized planning are not the same.

Since the P value (0.08) is less than 0.10, the alternate hypothesis is accepted which means that the factors influencing the evaluation in both cases are significantly different.

The higher mean value indicates that the identified factors, therefore have higher effect on schemes implementing at local level than at State or Central level.

4.4 PROFILE OF BENEFICIARY FARMERS

This section reveals the profile of the beneficiary farmers.

Table 48:Distribution of the beneficiaries according to their profile characteristics

(n=30 each)

Sl. No	Characteristics	Category	Respondents Adat		Respondents Arimpur		Respondents Chelakkara	
			Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	Age	Young (Up to 35 years)	0	0.00	1	3.30	0	0.00
		Middle (36 to 55 years)	14	46.70	14	46.70	11	36.70
		Elderly (56 years and above)	16	53.30	15	50.00	19	63.30
2	Gender	Male	29	96.70	22	73.30	21	70.00
		Female	1	3.30	8	26.70	9	30.00
3	Education	Illiterate	0	0.00	0	0.00	1	3.30
		Primary school	1	3.30	8	26.70	7	23.30
		High school	15	50.00	10	33.30	16	53.30
		Higher secondary	8	26.70	6	20.00	2	6.70
		Diploma	3	10.00	0	0.00	1	3.30
		Graduation or above	3	10.00	6	20.00	3	10.00
4	Family size	Small (Up to 2 members)	8	26.70	1	3.30	5	16.70
		Medium (3 to 4 members)	8	26.70	12	40.00	10	33.30

		Large (5 to 6 members)	14	46.70	13	43.30	11	36.70
		Very large (above 6 members)	0	0.00	4	13.30	4	13.30
5	Occupation	Farming	30	100.00	25	83.30	27	90.00
		Business	0	0.00	2	6.70	0	0.00
		Government employee	0	0.00	0	0.00	0	0.00
		Private employee	0	0.00	0	0.00	2	6.70
		Labourer	0	0.00	2	6.70	1	3.30
		Self-employed	0	0.00	1	3.30	0	0.00
6	Subsidiary occupation	Farming	0	0.00	5	16.70	3	10.00
		Business	0	0.00	0	0.00	2	6.70
		Government employee	0	0.00	0	0.00	0	0.00
		Private employee	12	40.00	2	6.70	2	6.70
		Labourer	1	3.30	9	30.00	10	33.30
		Self-employed	2	6.70	4	13.30	2	6.70
		Retired/ Pensioner	3	10.00	5	16.70	4	13.30
		Nil	5	16.70	5	16.70	8	26.70
7	Experience	Up to 15 years	2	6.70	6	20.00	3	10.00
		16 to 30 years	9	30.00	9	30.00	12	40.00
		31 to 45 years	12	40.00	9	30.00	6	20.00

		Above 45 years	7	23.30	6	20.00	9	30.00
8	Annual income	Low (Up to ₹ 50000)	0	0.00	0	0.00	0	0.00
		Medium (₹50001 to 1 lakh)	0	0.00	7	23.30	5	16.70
		High (above 1 lakh rupees)	30	100.00	23	76.70	25	83.30
9	Farm size (in acres)	Marginal (Below1 acre)	4	13.30	12	40.00	13	43.30
		Small (1.01 to 3 acres)	12	40.00	12	40.00	12	40.00
		Medium (3.01 to 5 acres)	8	26.70	2	6.70	2	6.70
		Large (Above 5 acres)	6	20.00	4	13.30	3	10.00
10	Area under paddy	Marginal (Below1 acre)	11	36.70	10	33.30	11	36.70
		Small (1.01 to 3 acres)	11	36.70	12	40.00	11	36.70
		Medium (3.01 to 5 acres)	7	23.30	3	10.00	7	23.30
		Large (Above 5 acres)	1	3.30	5	13.30	1	3.30
11	Pattern of rice cultivation	Leased	0	0.00	1	3.30	1	3.30
		Owned	30	100.00	21	70.00	20	66.70
		Both leased and owned	0	0.00	8	26.70	9	30.00

Profile of beneficiary farmers

Fig 4: Distribution of the respondents according to their age

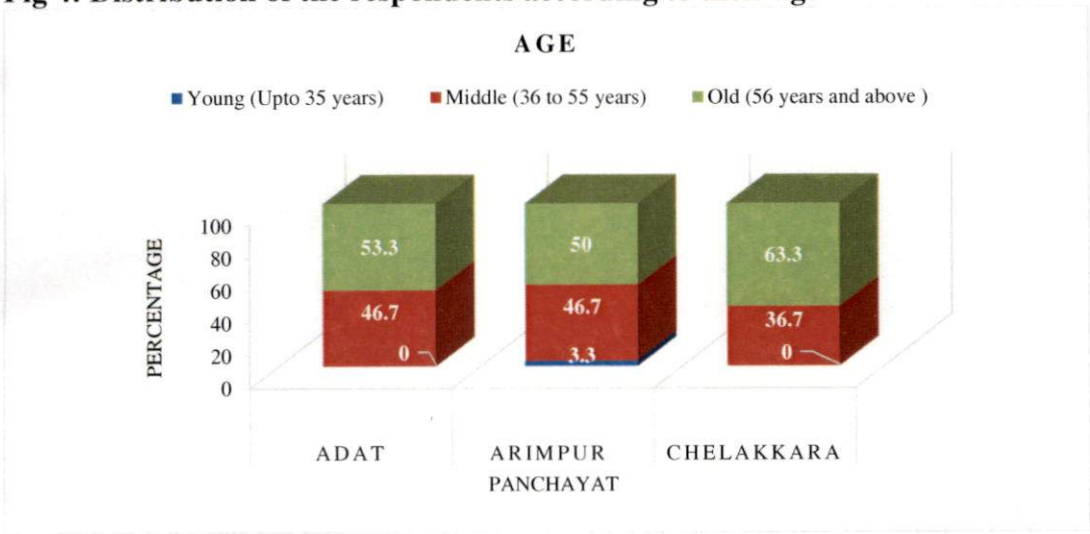


Fig 5: Distribution of beneficiary farmers based on their gender

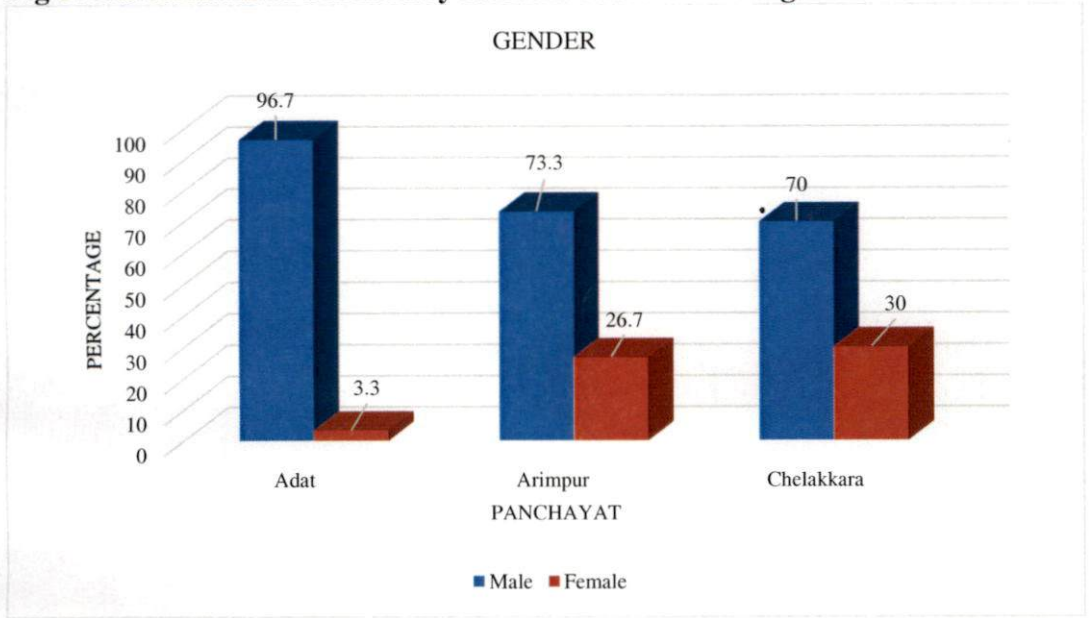


Fig 6. Distribution of the respondents based on their educational status

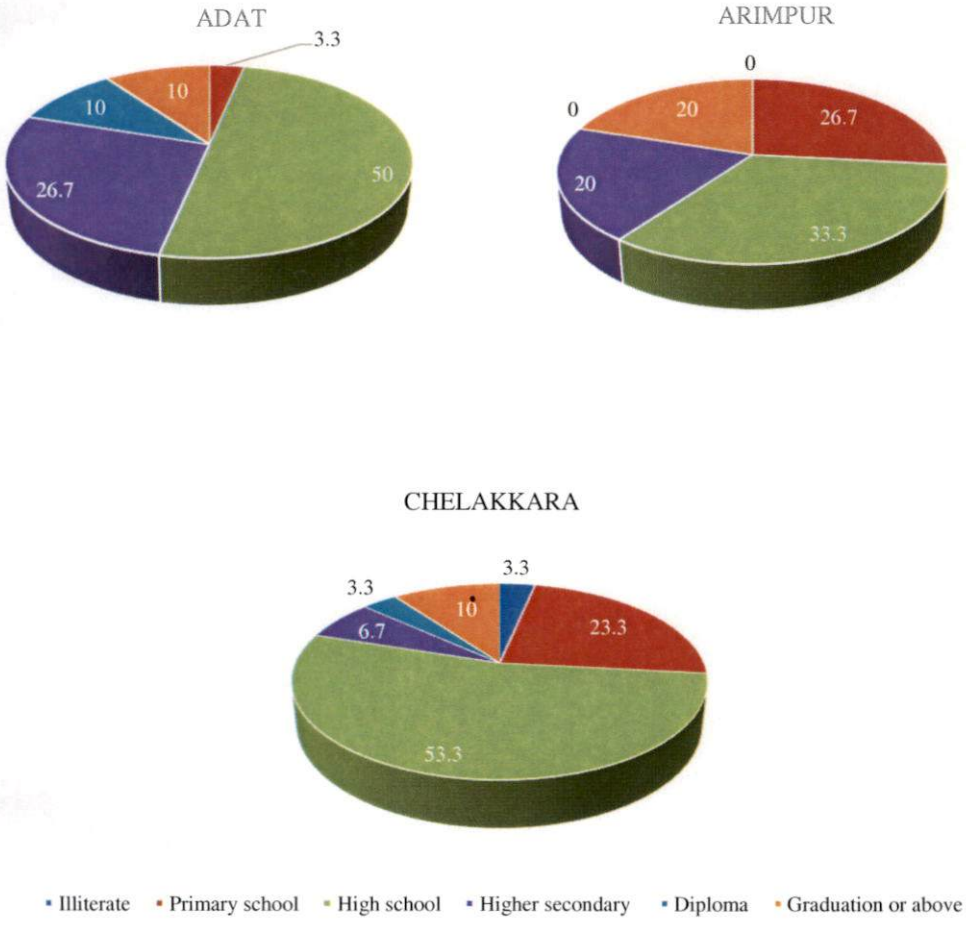


Fig 7: Distribution of beneficiary farmers based on their family size

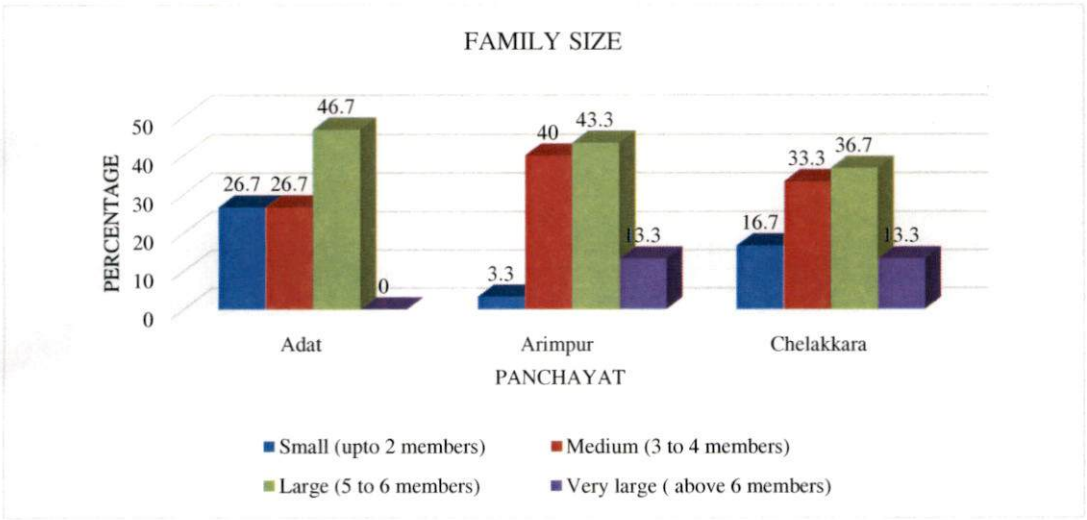


Fig 8: Distribution of beneficiary farmers based on their occupation

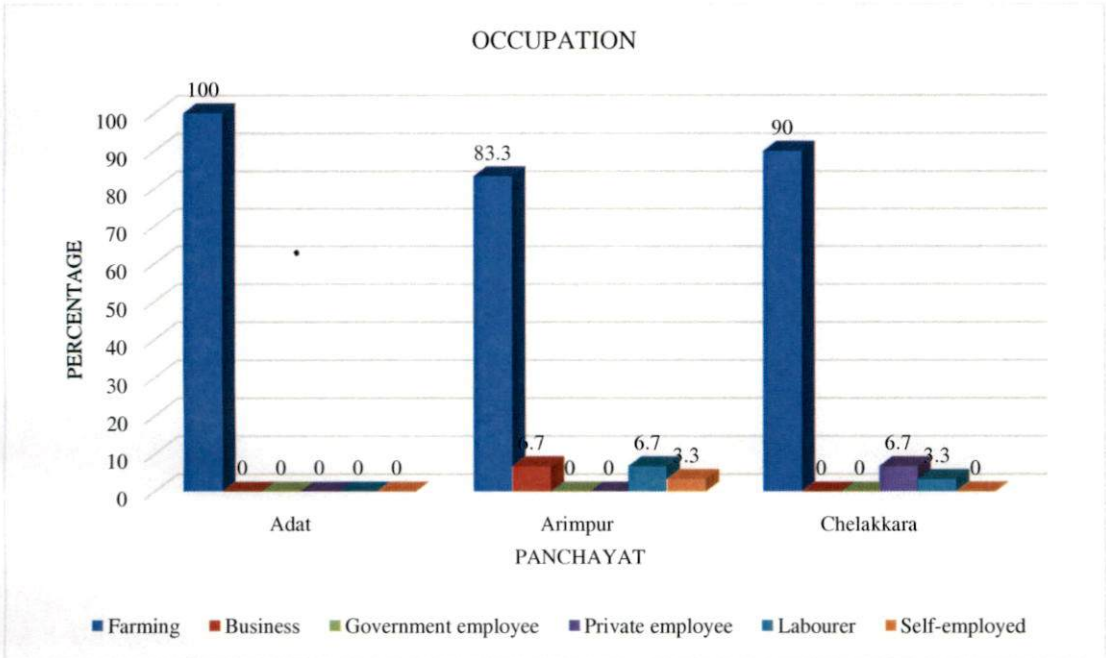


Fig 9: Distribution of beneficiary farmers based on their subsidiary occupation

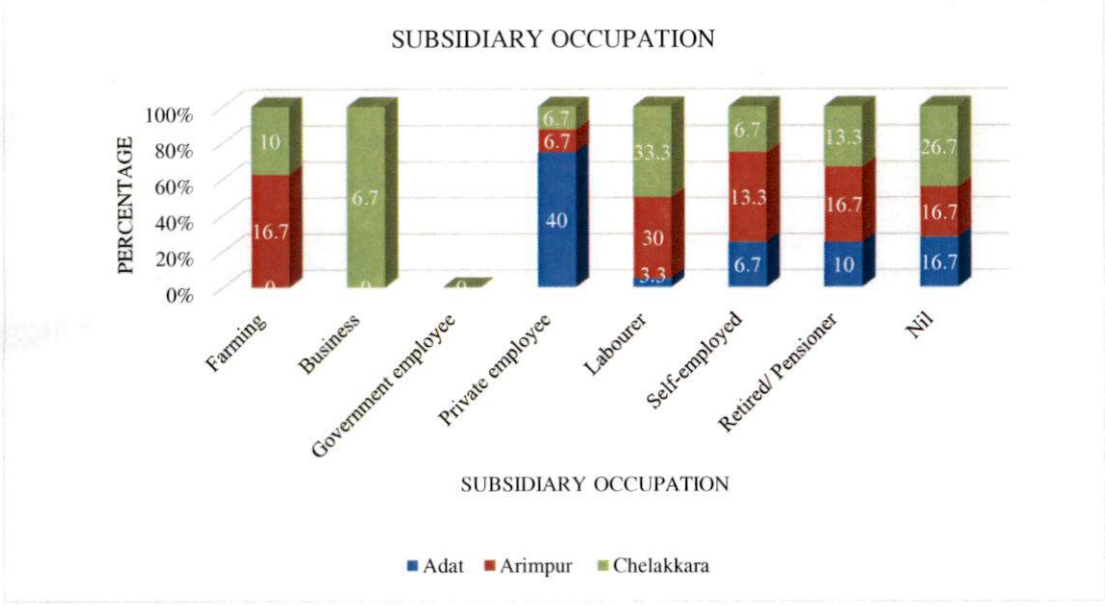


Fig 10: Distribution of beneficiary farmers based on their experience in paddy cultivation

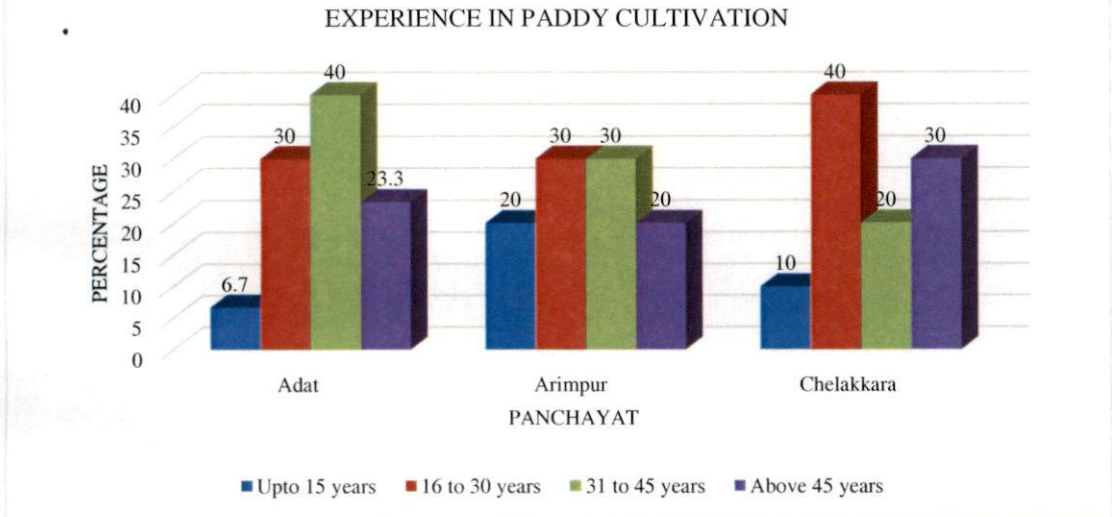


Fig 11: Distribution of beneficiary farmers based on their annual income

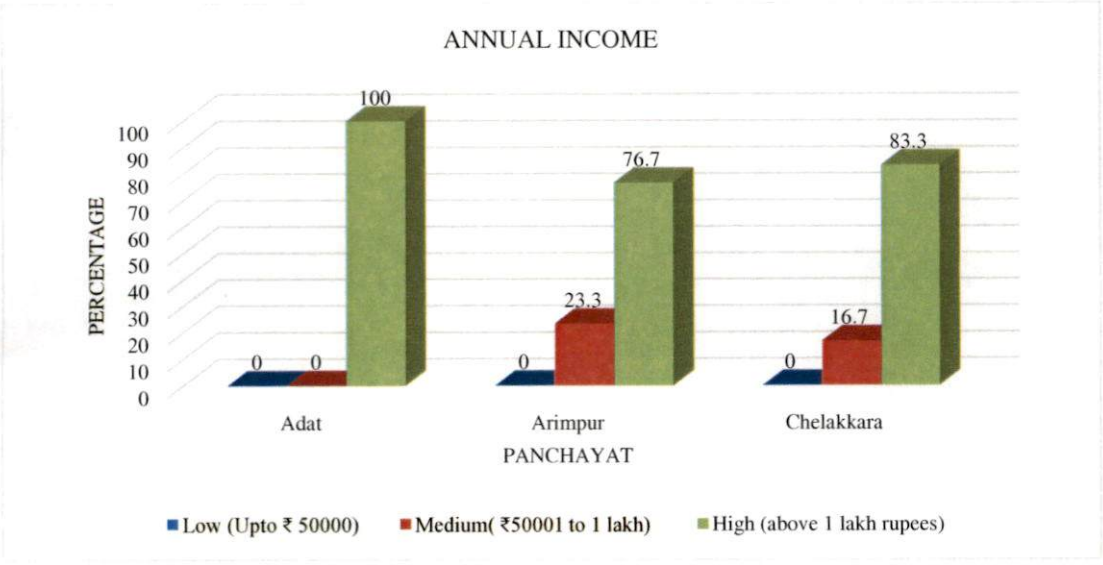


Fig 12: Distribution of beneficiary farmers based on the farm size

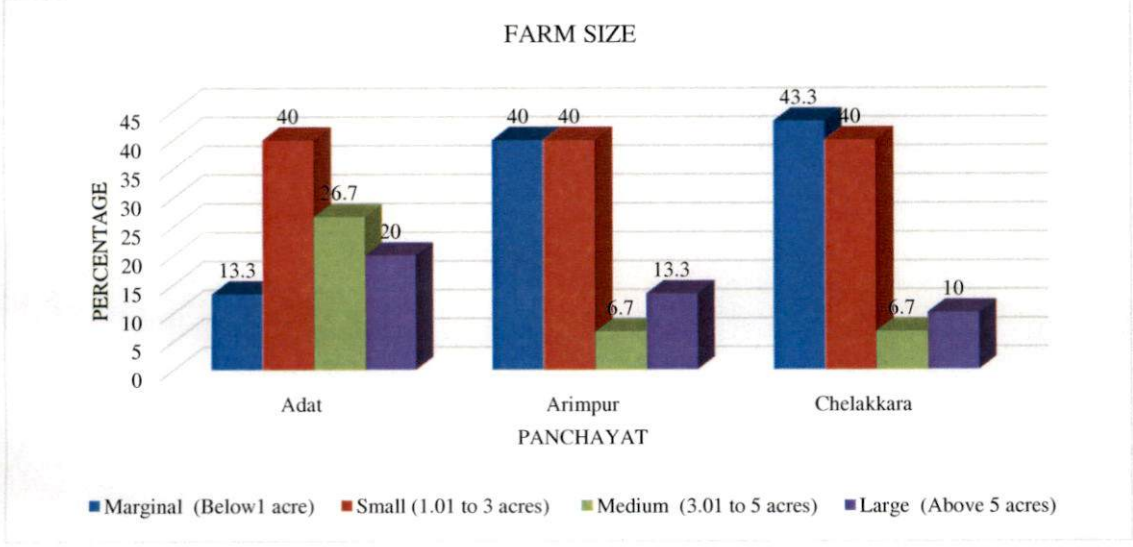


Fig 13: Distribution of beneficiary farmers based on their area under paddy

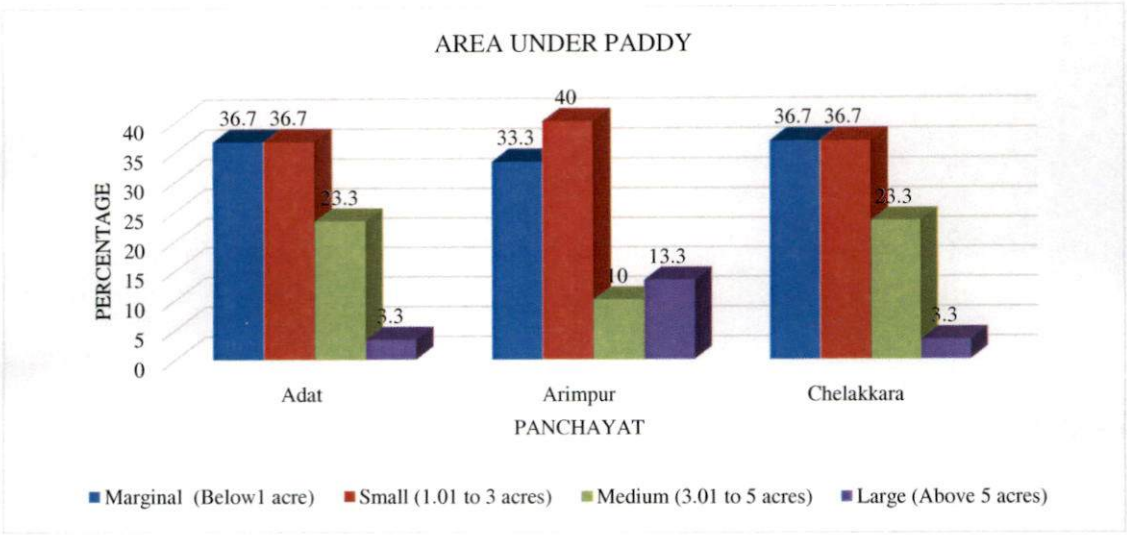
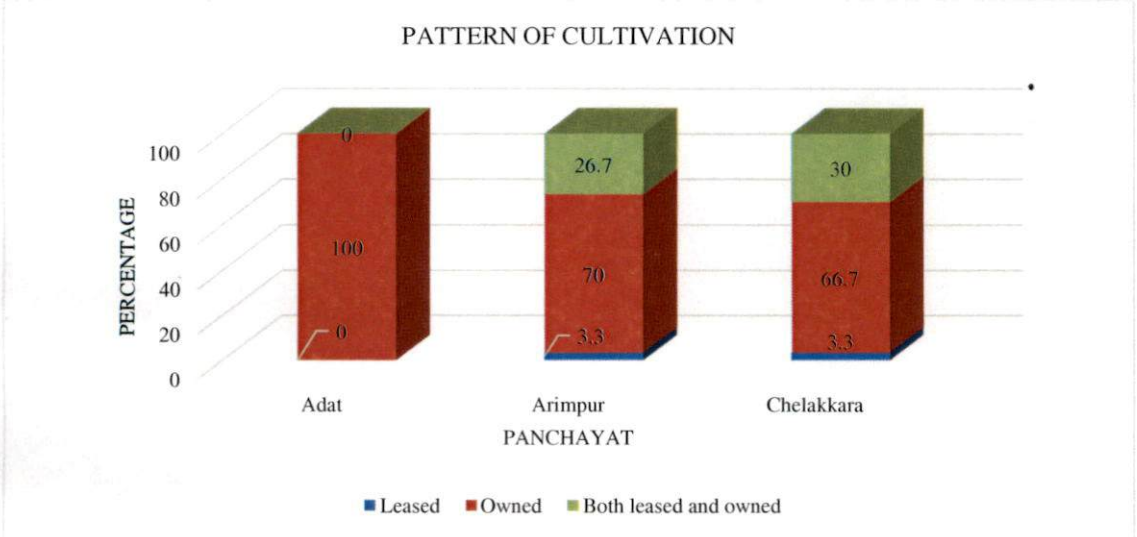


Fig 14: Distribution of beneficiary farmers based on their pattern of cultivation



4.4.1 Age

The fig 4 shows the distribution of the respondents according to their age. Among the respondents majority belongs to elderly age group (56 and above), in all the three panchayats. i.e., 53.30, 50.00 and 63.30 per cent in Adat, Arimpur and Chelakkara. The young aged respondents were available only in Arimpur (3.30 per cent) and middle age group were 46.70 per cent each in Adat and Arimpur, and 36.70 per cent in Chelakkara. This shows that the reluctance shown by the youngsters to take up paddy cultivation now-a-days as they consider it as low status job.

4.4.2 Gender

The fig 5 shows the distribution of beneficiary farmers based on their gender. Among them, 96.70, 73.30 and 70.00 per cent respondents were males, whereas 3.30, 26.70, and 30.00 per cent were females in Adat, Arimpur and Chelakkara panchayats respectively. It can be noted that male farmers dominate and women are not much interested to take up the paddy cultivation.

4.4.3 Educational status

Fig 6 depicts the distribution of the respondents based on their educational status. Only 3.30 per cent of the respondents from Arimpur were found to be illiterate. It can be observed that 3.30, 26.70 and 23.30 per cent had primary school education; 50.00, 33.30 and 53.30 per cent had high school education; 26.70, 20.00 and 6.70 per cent had higher secondary education; 10.00, 20.00, 10.00 per cent had graduation as their educational qualification in Adat, Arimpur and Chelakkara panchayats respectively. In Adat and Chelakkara 10.00 and 3.30 per cent possessed diploma. It is clear that almost all the farmers were educated and majority had high school education.

It can also be noted that highly educated ones rarely prefer paddy cultivation since they may think it as low status and less profitable job. This is in line with the findings made by (Smitha, 2011).

4.4.4 Family size

Fig. 7. illustrates that a substantial number of respondents belonged to large families having 5 to 6 members i.e., 46.70, 43.30, 36.70 per cent in Adat, Arimpur and Chelakkara respectively. In the three panchayats respondents from medium family varied from 26 to 40 per cent. In Arimpur and Chelakkara 13.30 per cent each of the farmer respondents belonged to very large family (above 6 members).

4.4.5 Occupation

Fig 8. Shows that in Adat, all the respondents had farming as their main occupation whereas Arimpur and Chelakkara had 83.30 and 90.00 per cent respectively. It shows that majority of the respondents relayed solely on farming for their living. The remaining respondents in Arimpur and Chelakkara were engaged in business, private and self-employment and wage labour.

4.4.6 Subsidiary occupation

Fig 9 shows that in addition to the farming which was found to be the main occupation, the respondents were engaged in other subsidiary occupation. The major reason for this was the seasonality of the paddy farming.

4.4.7 Experience in paddy cultivation

It can been seen from Fig. 10. that in Adat, most of the respondents had an experience of 31 to 45 years (40.00%), followed by 16 to 30 years, farmer respondents more than 45 years and up to 15 years of experience. In Arimpur 30.00 per cent each having 31 to 45 years and 16 to 20 years of experience followed by more than 45 years and up to 15 years of experience. Whereas in Chelakkara 40.00 per cent had 16 to 20 years of experience followed by more than 45 years and between 31 to 45 years. This shows that farming community consists mainly of experienced farmers

4.4.8 Annual income

Fig. 11. depicts that all the respondents from Adat, 76.67 per cent from Arimpur and 83.33 per cent Chelakkara had an annual income of above 1 lakh rupees followed by an annual income ranging from ₹ 50001 to 1 lakh in Arimpur (76.70%) and Chelakkara (83.30%). This shows that majority belonged to a high family annual income category, where in addition to the returns from farming, they had other sources of income either through subsidiary occupation or from other earning members.

4.4.9 Farm size

Fig 12. reveals that 40.00 per cent of the respondents were small farmers, followed by 26.70 per cent of medium and 20.00 per cent large farmers in Adat panchayat. In Arimpur 40.00 per cent were marginal and small farmers followed by 13.30 per cent large and 6.70 per cent medium farmers. In Chelakkara major portion of the respondents fell under the marginal category (43.30%) followed by small (40.00%) farmers. It can be concluded that majority of the respondents have less than 3 acres of land holdings.

4.4.10 Area under paddy

Fig.13. distribution of respondents based on the area under paddy cultivation. It pointed out that 36.70 per cent of the respondents were marginal and small paddy cultivating farmers followed by medium (23.30%) and large (3.30%) paddy farmers in both Adat and Chelakkara panchayats. In Arimpur major 40.00 per cent constituted of small farmers (1.01 to 3 acres), followed by 33.30 per cent of marginal (below 1 acre), 13.30 per cent of large (above 5 acres) and 10.00 per cent of medium (3.01 to 5 acres) paddy farmers. This shows majority are cultivating paddy on an area less than 5 acres.

4.4.11 Pattern of cultivation

Fig.14. indicates that all the respondents of Adat panchayat, 70.00 per cent and 66.70 per cent of Arimpur and Chelakkara respectively are cultivating paddy on their own land only. Only 3.30 per cent respondents both in Arimpur and Chelakkara are cultivating paddy on leased land. It may be noted that 26.70 per cent and 30.00 per cent respondents from Arimpur and Chelakkara are cultivating on both owned as well as leased lands.

Table 49: Distribution of the beneficiaries according to their socio-economic characteristics

(n=30 each)

Sl. no	Panchayat	Category			Mean	SD
		High		Low		
12. Economic motivation						
1	Adat	6.67	83.33	10.00	19.53	1.76
2	Arimpur	13.33	80.00	6.70	19.40	2.24
3	Chelakkara	13.33	66.67	20.00	19.60	1.19
13. Risk orientation						
1	Adat	3.33	86.67	10.00	19.40	1.71
2	Arimpur	16.70	63.33	20.00	19.40	2.24
3	Chelakkara	26.67	56.67	16.67	19.10	1.81
14. Mass media exposure						
1	Adat	20.00	76.67	3.33	21.73	3.88
2	Arimpur	16.67	70.00	13.33	21.47	4.50
3	Chelakkara	16.67	66.66	16.67	23.00	6.19
15. Social participation						
1	Adat	6.67	73.33	20.00	8.20	1.06
2	Arimpur	13.33	80.00	6.67	8.97	1.40
3	Chelakkara	10.00	83.33	6.67	8.87	1.33
16.Contact with extension agency						
1	Adat	13.33	76.67	10.00	10.10	2.28
2	Arimpur	16.67	73.33	10.00	10.97	3.09
3	Chelakkara	20.00	63.33	16.67	10.47	3.57
17. Scientific orientation						
1	Adat	13.33	73.33	13.33	18.77	1.22
2	Arimpur	23.33	63.33	13.33	18.40	1.54

3	Chelakkara	10.00	76.70	13.33	18.47	1.36
18. Market orientation						
1	Adat	16.67	70.00	13.33	37.53	2.29
2	Arimpur	10.00	83. 33	6.67	38.47	2.71
3	Chelakkara	26.67	56.67	16.67	37.53	2.24

Fig 15: Distribution of beneficiary farmers based on their economic motivation

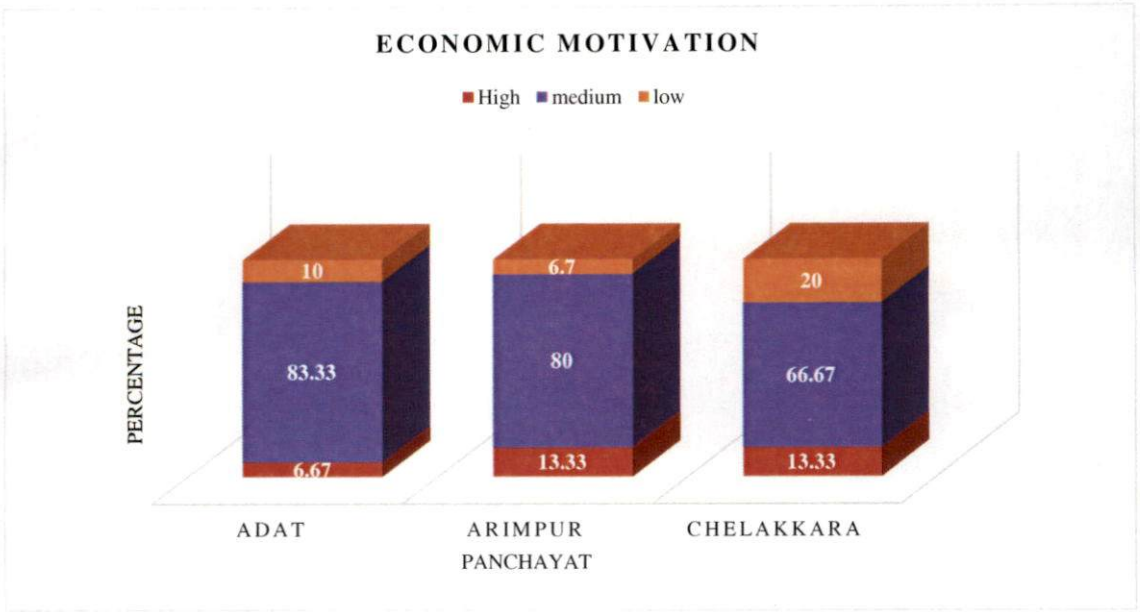


Fig 16: Distribution of beneficiary farmers based on their risk orientation

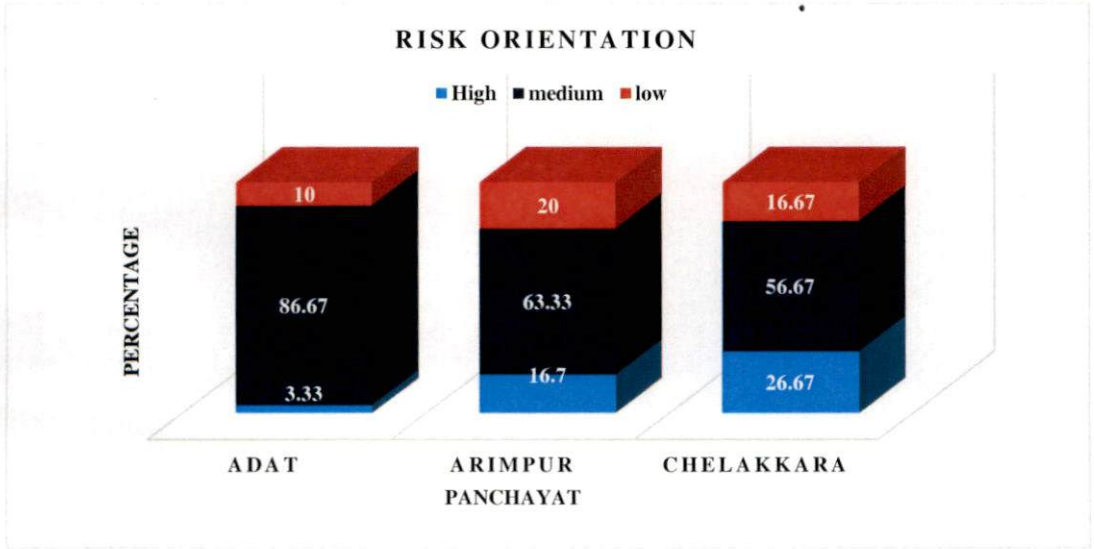


Fig 17: Distribution of beneficiary farmers based on their mass media exposure

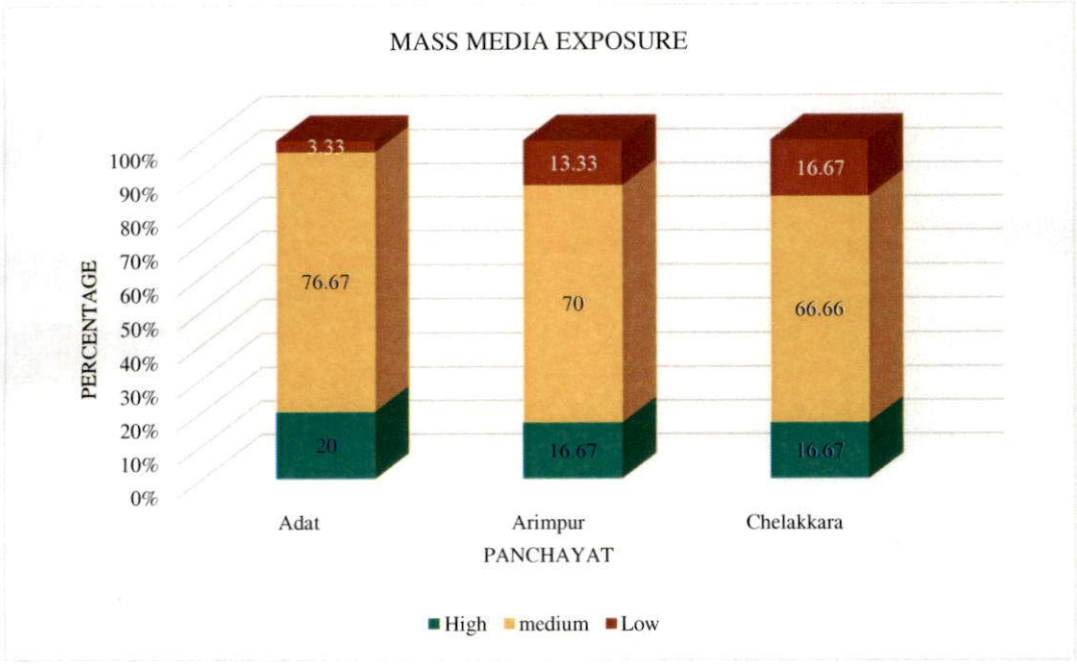


Fig 18: Distribution of beneficiary farmers based on their social participation

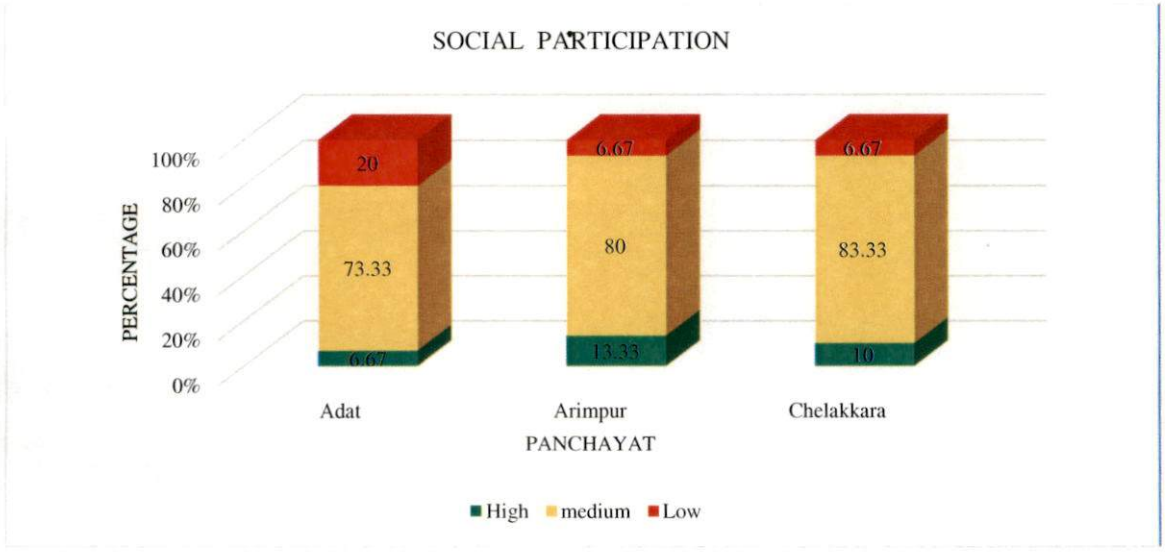


Fig 19: Distribution of beneficiary farmers based on their contact with extension agency

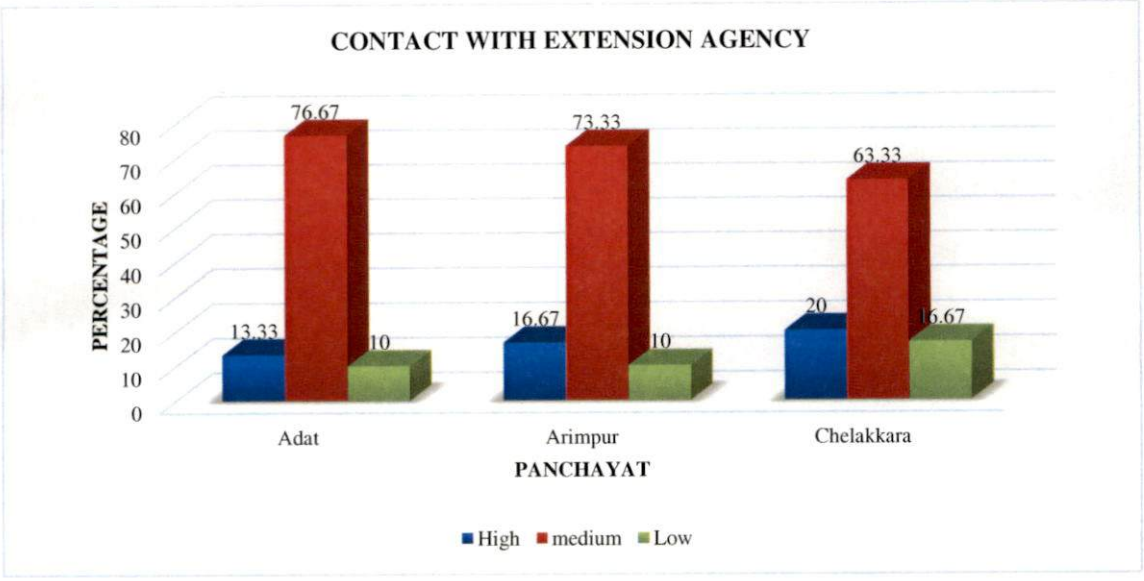


Fig 20: Distribution of beneficiary farmers based on their scientific orientation

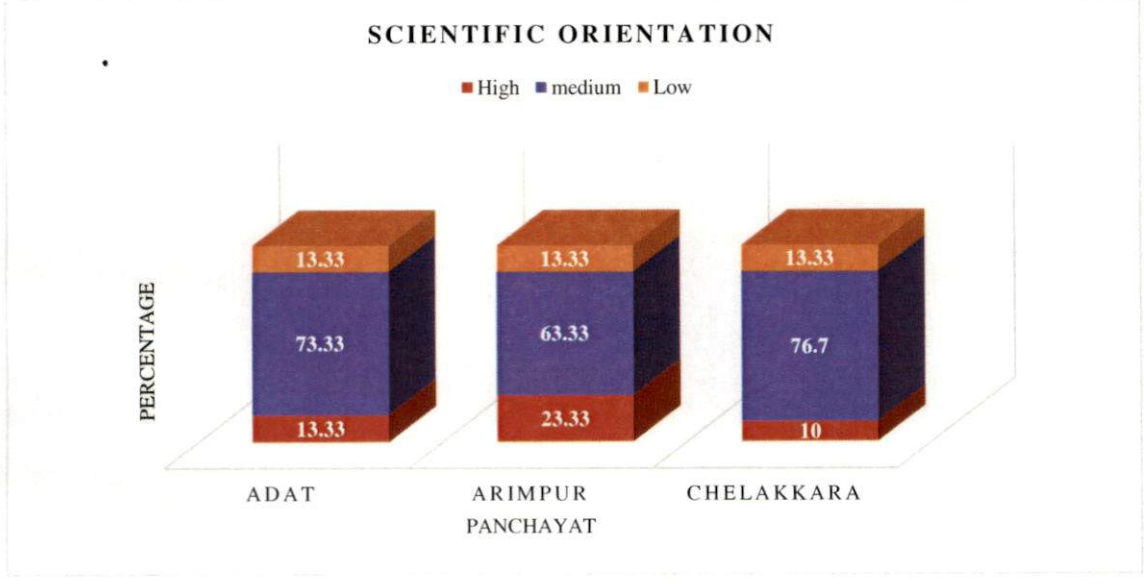
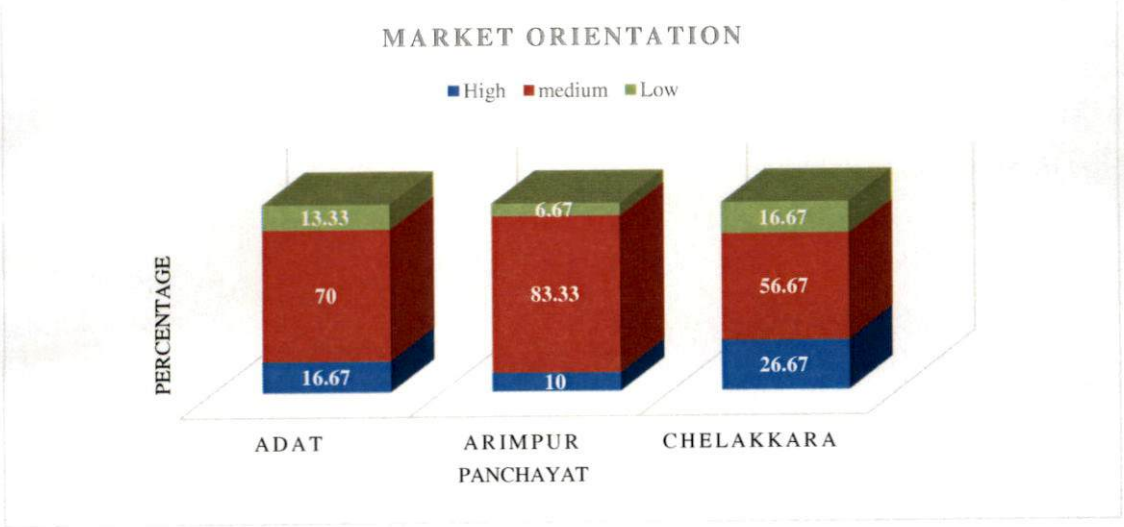


Fig 21: Distribution of beneficiary farmers based on their market orientation



4.4.12 Economic motivation

From Fig 15. it can be noted that majority of the respondents from Adat (83.33%), Arimpur (80.00%) and Chelakkara (66.67%) had medium level of economic motivation. Majority of the respondents were found to have farming as their major occupation and they had the urge and desire to earn more to improve their standard of living. The results go in line with the findings made by Rubeena (2015).

4.4.13 Risk orientation

Fig 16. reveals that majority of the respondents of Adat, Arimpur and Chelakkara i.e., 86.67, 63.33 and 56.67 per cent respectively had medium level of risk orientation. Timely supply of inputs, financial support and climatic factors might have contributed to the risk taking ability of the respondents.

4.4.14 Mass media exposure

Fig 17. displays that majority of the respondents of Adat, Arimpur and Chelakkara i.e., 76.67, 70.00 and 66.66 per cent respectively had medium level of mass media exposure. Chavan *et al* (2010) have reported that mass media exposure had significant correlation with the perceived effectiveness of agricultural programmes. The findings of present study are in line with that of Kamalakannan (2001), who found out that majority of the respondents were having medium level of mass media exposure.

4.4.15 Social participation

Fig. 18. Shows the distribution of respondents based on their social participation. It shows that majority of the respondents of Adat (73.33 %), Arimpur (80.00 %) and Chelakkara (83.33%) had medium level of social participation. Chavai *et al.* (2015) has obtained similar results in their study.

4.4.16 Contact with extension agency

Fig. 19. depicts distribution of respondents based on their contact with extension agency. It reveals that majority of the respondents of Adat (76.67 %), Arimpur (73.33 %) and Chelakkara (63.33%) had medium level of contact with extension agency. From these three panchayats, 13.33, 16.67 and 20.00 per cent of respondents had high level; 10, 10 and 16.67 per cent of them had low level of contact with extension agency. Majority of farmers had contact with agricultural assistants and agricultural officers, but the frequency of contact was more in case of *padasekhara samithi* office bearers. The farmers regularly contacted them compared to officers.

4.4.17 Scientific orientation

Fig. 20 shows the distribution of the respondents based on their scientific orientation. It shows that majority of the respondents of Adat (73.33 %), Arimpur (63.33 %) and Chelakkara (76.70%) had medium level of scientific orientation. From these three panchayats, 13.33, 23.33, and 10.00 per cent of respondents had high level; 13.33 per cent each of them had low level of scientific orientation.

4.4.18 Market orientation

Fig.21 illustrates the distribution of the respondents based on their market orientation. It reveals that majority of the respondents of Adat (70.00 %), Arimpur (83.33 %) and Chelakkara (56.67%) had medium level of market orientation. High level of market orientation was seen among 16.67, 10.00, and 26.67 per cent of respondents of Adat, Arimpur and Chelakkara panchayat respectively.

4.5 BENEFITS ACCRUED

The benefits availed by the farmers through the implantation of schemes under decentralized planning were noted down and are presented below:

Table 50: Benefits derived from the paddy promotions programmes

Sl. no	Dimension	Benefits	Panchayat (n=30 each)		
			Adat	Arimpur	Chelakkara
1	Socio-economic development	Increase in income from farm	70.00	83.33	76.67
		Employment to family members and others	73.33	73.33	73.33
		Assistance to meet increasing cost of cultivation	40.00	63.33	80.00
		Brought fallow land under cultivation	-	-	30.00

		Membership in farmer groups	100.00	100.00	100.00
2	Assets generated	Knapsack sprayer	13.33	20.00	23.33
3	Input supplied	HYV seeds	100.00	100.00	100.00
		Organic manure	10.00	-	76.67
		Chemical fertilizers	-	-	73.33
		Green manure seeds	-	-	56.67
		Soil ameliorants	53.33	-	53.33
		Plant protection chemicals	-	-	36.33
		Bio plant protectors/bio control agents	73.33	-	33.33
4	Skill development	Identification of pest, disease & weed	90.00	56.67	83.33
		Technical skill	76.67	30.00	46.67
		Promoted group dynamics among farmers	100.00	93.33	100.00
		Improved knowledge on new farming practices	100.00	53.33	73.33

Source: Compiled from primary data

The benefits availed by the farmers include socio-economic development, asset generation, inputs supply and skill development.

The results from the Table 50 denotes that skill development was the most important output. In this, all the Adat farmers, followed by Chelakkara and Arimpur have gained knowledge on new farming practices and among farmers group dynamics was promoted. Majority of the respondents i.e., 90.00 per cent developed their skill to

identify pest, disease and weeds and more than three-fourth farmers gained technical skills.

Regarding the inputs supplied, all of them have availed seed. All the beneficiaries of Chelakkara and 73.33 per cent of Adat panchayat have received either bio plant protectors or bio-control agents and soil ameliorants (53.33 %).

It can be seen from the table, that while Arimpur farmers received only seed inputs, Chelakkara farmers received seed, organic manure, chemical fertilizers, green manure seeds, soil ameliorants, plant protection chemicals, bio plant protectors and bio control agents.

Majority of the benefits were distributed to the farmers on group basis, through *padasekhara samithis.* The beneficiaries from three panchayats opined that the scheme created employment opportunities for family members and others, provided assistance to cope up with the increasing cost of cultivation, and has also increased the net income from farm. The Chelakkara farmers were able to bring fallow land under cultivation.

The assets generated through the schemes were found to be very low in all the three panchayats.

Rubeena (2015) in her study titled 'Revitalization of Agricultural Technology Management Agency (ATMA): A comparative study in Thiruvananthapuram and Kottayam districts of Kerala, reported that most of the farmers experienced a slight increase in the productivity of paddy, knowledge on application of bio-control agents, participation in exposure visits, trainings, farm schools, farmer field schools, demonstration, resulting in awareness on yield improvement techniques. This discussed report is in line with the present research findings.

4.6.1 PERCEPTION OF BENEFICIARY FARMERS ON THE EFFECTIVENESS OF PADDY PROMOTION PROGRAMMES UNDER DECENTRALIZED PLANNING

Table 51: Perception of beneficiary farmers on effectiveness of programmes

Sl. no	Dimensions	Kruskal Wallis test (n = 30 each)			
		Adat	Arimpur	Chelakkara	H value
	Sub – dimensions				
1	Socio-economic development	29.92 (3)	31.33 (2)	75.25 (1)	62.7**
2	Agricultural input supply	74.25 (1)	15.62 (3)	46.63 (2)	76.3**
3	Institutional support	53.92 (1)	47.63 (2)	34.95 (3)	8.7*
4	Knowledge enhancement	60.33 (1)	20.57 (3)	55.60 (2)	42.8**
5	Empowerment perspective	56.32 (1)	46.92 (2)	33.27 (3)	12.6**
	Dimensions				
I.	Overall perception	67.67 (1)	15.93 (2)	52.90 (3)	62.6**

( ) Ranks are given in parenthesis ** *significance at 5 per cent* * *significance at 10 per cent*

Kruskal Wallis test was employed to rank and assess the perception of the beneficiaries of three panchayats on the effectiveness of paddy promotion programmes implemented under decentralized planning.

The analysis revealed that the beneficiary farmers from Adat panchayat had a greater perception score on the effectiveness of paddy promotion programmes implemented under decentralized planning, followed by Chelakkara panchayat. The result draws special attention to the mean perception score of the beneficiaries of Arimpur panchayat, which was very low as compared to the beneficiaries of other two panchayats.

Dimension-wise perception of beneficiary farmers on effectiveness of paddy promotion programmes highlights that beneficiaries of Adat panchayat had higher mean perception towards various dimensions *viz;* agricultural input, institutional factors, knowledge and empowerment aspects and a lower mean perception towards socio economic aspects. The external institutions like Farmers Service Cooperative banks were highly relied upon by the farmers.

The Adat farmers have been facilitated with strong institutional support, which eased the implementation as well as benefit availing processes to a great extent. This was one of the vital factors that has resulted in higher perception towards input and institutional aspects, even though the components availed were less compared to other study areas. The low perception of Adat farmers on socio- economic aspects can be substantiated by considering their annual income, which throws light to the fact that the beneficiaries of Adat were comparatively well off and might have perceived that the implementation of the schemes had comparatively less effect .The literature review supports the fact that farmers in Adat panchayat had been very enthusiastic and innovative and early adopters of the latest practices in farming (Nidhin, 2015). This can be viewed as the foremost reason for their greater perception towards knowledge as well as empowerment aspects.

Beneficiaries of Arimpur panchayat had moderate mean perception on socio-economic, institutional, and empowerment aspects and comparatively low mean perception on agricultural input aspects and knowledge aspects.

The low perception on agricultural input aspects was mainly due to delayed input supply, low quality of the seeds supplied resulted in poor germination. To overcome this wretched scenario the farmers use double rate of seed and higher dose of fertilizer which aggravate the situation. This justifies their low perception score towards knowledge aspects and also influences the socio economic perception. The lack of knowledge on scientific cultivation practices leads to incur increased cost of paddy cultivation.

Also limited number of subsidized components in schemes and inadequate incentives to meet the increasing wage rate aggravate the socio –economic state even when the farmers perceived the scheme implemented as relevant to their situation. This rationalizes the moderate perception score of farmers on socio economic aspects. The farmers relied mainly on Krishibhavan for availing benefits. The overload of work assigned to the Agricultural Officer resulted in reducing the number of visits made to farmers fields and was confined to whenever the farmer calls upon the officer for a field visit to solve any immediate need. The *padasekhara samithis* were active in the area and had been facilitating the farmers with required assistance on time, inclusive of market assistance. Hence, the beneficiary farmers had moderate perception score on institutional aspects. The farmers claimed to have aroused great interest in availing paddy schemes as it revitalized the group activities carried out through the *padasekhara samithis,* which further boosted up their spirits to be the best *padashekaram*. At the same time it was noted that the schemes had moderate influence to assure economic empowerment. Therefore, the medium perception score for empowerment aspect was exhibited.

A high mean perception on socio economic aspects, medium or moderate mean perception on agricultural input aspects and knowledge aspects and low mean perception on institutional and empowerment aspects were exhibited by the beneficiaries of Chelakkara panchayat.

The beneficiaries from Chelakkara unanimously opined that the implementation of paddy schemes had a positive influence on the socio-economic condition. They stated that the schemes implemented were relevant and need based. The incentives provided were highly effective in coping up with the high wage rates and increasing cost of cultivation. They disclosed that climatic vagaries as the major hindering factor which prevented them from enjoying the full benefits of the schemes. The beneficiaries disclosed that the quality of the inputs supplied was satisfactory, but timely availability of required quantity was not assured. The farmers agreed that they were availing fertilizers, plant protection chemicals and botanicals at subsidized rates. Moderate perception score on knowledge aspects points out to the fact that they are becoming more aware of the importance of paddy field conservation, adverse effect due to the overuse of chemicals and have started adopting scientific practices in fields. Some of the farmers have developed interest towards organic farming also. The farmers had low level of perception on institutional aspects since there was delay in supply of required inputs and they opined that *padashekhara samitis* were extending great help in tackling the immediate needs of the farmers. The farmers stated that carrying out the field operations as a group, has helped to reduce cost, and enable mechanization to a greater extent. The schemes have succeeded in arousing interests among farmers but failed to attract youth and women.

The overall result obtained reveals that beneficiaries of Adat panchayat has perceived the schemes as most effective and beneficiaries of Arimpur panchayat has perceived it as least effective. Farmers of Chelakkara panchayat perceived that the schemes were moderately effective which might be due to climatic vagaries.

Rubeena (2015) inferred that majority of the respondents from Kottayam and Thiruvananthapuram districts had medium level of perception about effective implementation of ATMA schemes. These are in accordance with the present study results.

4.6.2 PERCEPTION OF EXTENSION PERSONNEL ON THE EFFECTIVENESS OF PADDY PROMOTION PROGRAMMES UNDER DECENTRALIZED PLANNING

Table 52: Perception of extension personnel on effectiveness of paddy promotion programmes under decentralized planning

Sl.No	Dimension	Category	Respondents (n=30)	
			Frequency	Percentage
1	Socio-economic development	Very low	0	0.00
		Low	0	0.00
		Average	0	0.00
		Good	14	46.67
		Very good/ Excellent	16	53.33
2	Agricultural inputs supply	Very low	0	0.00
		Low	0	0.00
		Average	0	0.00
		Good	27	90.00
		Very good/ Excellent	3	10.00
3	Institutional support	Very low	0	0.00
		Low	0	0.00
		Average	0	0.00
		Good	16	53.33
		Very good/ Excellent	14	46.67
4	Knowledge enhancement	Very low	0	0.00
		Low	0	0.00
		Average	2	6.66
		Good	20	66.67
		Very good/ Excellent	8	26.67

5	Empowerment perspective	Very low	0	0.00
		Low	0	0.00
		Average	1	3.33
		Good	5	16.67
		Very good/ Excellent	24	80.00
I.	Overall perception on effectiveness of paddy promotion programmes	Very low	0	0.00
		Low	0	0.00
		Average	0	0.00
		Good	27	90.00
		Very good/ Excellent	3	10.00

Source: Compiled from primary data

The above table reveals that majority of the extension personnel (90.00%) has perceived the effectiveness of paddy promotion programmes implemented under decentralized planning was good and 10.00 per cent has rated the effectiveness as excellent category.

More than half of the respondents perceived that the implemented programmes were effective in improving the socio-economic conditions and empowerment of the beneficiary farmers. Most of the respondents had a good perception on agricultural inputs made available through the schemes, institutional support and knowledge management.

Majority of them stated that the schemes were relevant to the situation and need based and advocated scientific farming practices. They further claimed that the incentives given had aided the farmers to cope up with escalating cost of cultivation. They opined that the rice productivity has improved and cultivation was profitable.

They also pointed out that the farmers had developed a positive attitude towards paddy schemes that supported the revitalization of group farming activities and also enhanced motivation among farming communities. According to extension personnel many beneficiaries have availed knapsack sprayers as an asset through different paddy promotion schemes as enlisted in the benefits accrued and also opined that mechanization has improved the labour productivity in carrying out farm operations.

The officials also emphasized that the awareness, interest and responsibility of the farmers towards paddy field conservation have improved considerably. They cited and shared examples of many farmers who have been practicing minimum use of chemicals and which lead others in the phase of transition to organic farming.

Regarding the perception on agricultural inputs supplied and institutional support provided, even when most of them had perceived it as good and excellent, they expressed their distress and helpless condition, where they become impuissant due to lack of timely input supply and overload of administrative work which pull back them from conducting regular field survey.

In brief the extension personnel had good perception on the overall effectiveness of the paddy promotion programmes implemented under decentralized planning.

Peter (2014) after analyzing the Lead farmer centred extension adivsory and delivery service (LEADS) concluded 75.00 per cent of the agricultural officers perceived decentralized planning as 'moderately efficient and effective', whereas only 15.00 per cent of agricultural assistants and 3.00 per cent of agricultural officers had perceived it as 'highly efficient and effective'. This is in line with the current research results obtained.

6.7.1 CONSTRAINTS FELT BY BENEFICIARY FARMERS

The constraints experienced by the farmers are listed below:

Table 53: Constraints felt by beneficiary farmers

Sl. no	Dimension	Kruskal Wallis test (n = 30 each)			
		Adat	Arimpur	Chelakkara	H value
	Sub-dimension wise constraints				
1	Input constraints	24.20 (3)	47.70 (2)	64.60 (1)	39.3**
2	Time constraints	17.77 (3)	61.97 (1)	56.77 (2)	60.1**
3	Financial constraints	24.42 (3)	66.55 (1)	45.53 (2)	43.6**
4	Infrastructural constraints	28.25 (3)	57.12 (1)	51.13 (2)	21.7**
5	Manpower constraints	31.98 (3)	50.10 (2)	54.42 (1)	15.0**
6	Knowledge constraints	17.35 (3)	72.12 (1)	47.95 (2)	67.9**
7	Market constraints	35.43 3)	53.12 (1)	47.95 (2)	8.0*
8	Scheme feature constraints	42.12 (2)	53.87 (1)	40.52 (3)	5.4#
	Dimensions				
I.	Overall constraints	23.47	64.93	48.10	38.4**

( ) Ranks are given in parenthesis ** *significance at 5 per cent* * *significance at 10 per cent* # *Not significant*

The Kruskal Wallis test results evident that beneficiaries from Arimpur panchayat perceived maximum constraints in the implementation of paddy development programmes, followed by Chelakkara and Adat panchayat.

The dimension wise constraints perceived indicates that financial, time, infrastructural, knowledge, market and scheme feature constraints were the most severe, followed by manpower and input constraints as more severe in Arimpur panchayat. In financial constraints the delay in receiving the payment for the harvest was found to be more severe, followed by high labour and plant protection chemical cost. And they stated that the financial assistance provided at present was not enough. Lack of timely monitoring, release of fund and input availability were perceived as the major problem felt in the area. The farmers disclosed that their dissatisfaction with respect to their quality and quantity of the inputs supplied. It was also identified that the absence of proper storage and logistic facilities and fragmented land holdings also affected the successful implementation of scheme in the panchayat. The knowledge level of the famers were found to be very poor especially the technical know-how and scientific practices relating to plant protection chemicals. In market constraints the delay in payment made by Supplyco was identified as the most severe constraint. In scheme feature, lack of trainings on skill development and value addition activities, absence of programmes promoting cultivation of local varieties were listed out as the main problems. Non-availability of labour as well as lack of timely supply of required quantity of quality inputs were the moderately perceived constraints.

Chelakkara panchayat experienced severe input and manpower constraints followed by time, financial, infrastructural, knowledge and market constraints.

In Chelakkara panchayat, water scarcity was identified as a major problem, which resulted in frequent crop failure. In addition to this lack of timely availability of quality inputs in required quantity further aggravated the situation. Labour shortage and non –availability of officers for regular field visits were also severe. Lack of timely release of fund, low financial assistance, high labour and plant protection chemical cost, delayed payment for the produce, lack of storage facility, lack of technical and scientific knowledge were also identified as predominant constraints.

Beneficiaries of Adat panchayat perceived scheme feature constraints as more severe and others as less severe. Adat farmers listed absence of programmes promoting cultivation of local varieties, lack of training programmes on skill development and value addition activities, complexity involved in availing schemes as the major constraints followed by delayed payment, manpower shortage and lack of storage facilities.

The findings of the study is in conformity with the results obtained by Jnanadevan (1993), Peterson (1997) and Saran *et al.* (1998) as explained below:

Jnanadevan (1993) identified the constraints as high labour cost, non-availability of labour in time, inadequate and untimely supply of seedlings, inadequate financial assistance, delay in timely disbursement of money, poor and untimely supply of seedlings and non- availability of sufficient water for irrigation during summer months. Lack of proper supervision and guidance from the extension officers were also mentioned.

Peterson (1997) opined that farmers needed inputs to increase production but timely access to these were often a major problem to the majority of the farming community.

Saran *et al.* (1998) found that farmers got more than half of their requirement of agricultural labour in time. They got hardly 10 to 20 per cent of their seeds and fertilizers in time. More than 80 per cent of inputs were not available at all. Resources like seeds, fertilizer, plant protection inputs, scientific know-how, marketing facility and agricultural labour were available in varying degree in time but with great difficulty.

4.7.2 CONSTRAINTS FELT BY THE EXTENSION PERSONNEL

Constarints felt by the extension personnel were studied and are furnished below:

Table 54: Constraints perceived by extension personnel

(n=30)

Sl. No	Dimension	Constraint index	Rank
1	Input constraints	71.48	4
2	Time constraints	64.81	5
3	Financial constraints	80.56	2
4	Infrastructural constraints	60.89	6
5	Manpower constraints	85.56	1
6	Scheme feature constraints	73.11	3

Source: Compiled from primary data

It could be inferred from the Table 51, that the major constraints perceived by the extension personnel was manpower constraints i.e., labour shortage and non-availability of adequate implementing officers followed by financial, scheme feature, input, time and infrastructural constraints. Among, financial constraints high labour cost, delay in receiving payment for the produce sold to Supplyco, high cost of plant protection chemicals and insufficient financial assistance were the main items. In scheme feature constraints lack of components in the scheme addressing the crop loss due to various climatic vagaries, complexity involved in availing the scheme, absence of programmes promoting local varieties, lack of training programmes in value addition and skill development activities respectively were perceived as the major drawbacks. Lack of quality inputs and water scarcity were the important constraints identified under input category while lack of timely availability of inputs and delay in

release of fund were the major difficulties under time constraints. Lack of storage facilities was the foremost limitation identified under infrastructural constraint.

A study of constraints expressed by the extension functionaries involved in ATMA by Kumar *et al.* (2011), revealed that higher number of schemes and vacancies, less number of demonstrations on the existing farming systems in the district and lack of technological training on different farming systems pertaining to agriculture were the major constraints. The results of the present study is in accordance with this.

4.8 SUGGESTIONS TO IMPROVE THE EFFECTIVENESS OF PADDY PROMOTION PROGRAMMES

Suggestions are proposed based on the present study for effectiveness of paddy promotion programmes.

4.8.1 General suggestions for improving effectiveness of paddy promotion programmes

- The yearly financial allocation should be increased
- The beneficiary share should be reduced by increasing the subsidy share
- More schemes and scheme components including distribution of organic components and farm implements should be added
- More emphasis to be given on conservation of local varieties
- Schemes attracting the women and youth should be included more
- Since majority of the farmers fall in marginal and small farmer category, schemes aiming upland and fallow land cultivation should be initiated to bring more area under paddy

- The procedure for availing schemes should be simplified
- Service of more field officers for regular monitoring of field activities may be ensured based on the geographical area of the panchayat
- Strengthen the institutional linkages – Farmers Service Cooperative Banks, input dealers, marketing agents
- Promote formation of '*thozhil sena*' groups by *Kudumbashree* members and youth
- Strengthening of monitoring systems
- Empowerment of office bearers of *padasekhara samithis* and leading farmers through trainings
- Create awareness about the features of every scheme before the implementation
- Steps should be taken for ensuring timely supply of inputs
- Selection of beneficiaries and preparation of list should be prepared at the earliest to avoid delay in the implementation process
- Include an emergency fund at panchayat level for meeting the unexpected loss due to natural calamity and if not utilized, provision should be made to divert the fund for paddy promotional activities for the subsequent years
- Provision for timely disbursement of procurement price to the farmers
- Merge with Mahatma Gandhi National Rural Employment Guarantee Scheme for ensuring adequate labour supply
- Formulate projects for financial assistance for establishing infrastructural facilities at panchayat level
- Promote schemes on processing and value addition.
- Promote more capacity building programmes

- ❖ Agro Service Centres can be established under society registration at panchayat level and can act as input and service provider for various agricultural schemes
- ❖ Community level seed bank can be promoted
- ❖ Rice producers company can be promoted in panchayats with steady and large area under cultivation and with aspiring and innovative farmers

4.8.2 Suggestions for Adat panchayat

- ✓ Develop promotional strategies for certification and ensuring better price and market for organic produce.

4.8.3 Suggestions for Arimpur panchayat

- ✓ Facilitate timely input, technical and financial support to the paddy farmers
- ✓ Promote scientific cultivation practices through capacity building
- ✓ Infrastructural and logistic facilities should be improvised

4.8.4 Suggestions for Chelakkara panchayat

- ✓ The subsidies should be increased especially promoting bio-plant protectors to reduce the relay on plant protection chemicals.

4.8.5 Suggestions to improving Central and State sponsored schemes

- ❖ Strengthen the farmer field schools in all panchayats

- The procedures for availing the benefits of State and Central insurance schemes should be simplified
- Provision should be made to ensure the timely availability inputs to the paddy farmers based on the paddy growing season of the State
- Provide financial assistance for rejuvenation of labour bank

SUMMARY AND CONCLUSION

CHAPTER V
SUMMARY AND CONCLUSION

The main objective of paddy promotion programmes is to enhance the production and productivity of the paddy by extending financial assistance, material inputs and providing technical assistance, material inputs and providing technical guidance to the farming community. It is not evident, whether these assistance provided through the development programmes are effective in bringing about the desired change. Assessing the perception of the farmers and extension personnel is an effective way to analyse this. And in Kerala limited studies have been attempted in this line. Therefore the present study was under taken with the following specific objectives:

- ✓ To analyse the trend of paddy promotion programmes implemented through Krishibhavans
- ✓ To delineate the components of the programmes
- ✓ To identify the factors influencing the implementation
- ✓ To study the perception of beneficiary farmers and extension personnelon the effectiveness of programmes under decentralized planning
- ✓ To suggest modifications to improve the effectiveness of paddy promotion programmes

The investigation was carried out in Thrissur district. Multi-stage random sampling technique was followed. Three blocks *viz;* Pazhayannur, Puzhakal, and Anthikkad having maximum area under paddy cultivation were selected. And from thses blocks thirty extension personnel were selected randomly. Adopting the same selection

criteria, one panchayat each were selescted *viz;* Chelakkara, Adat and Arimpur. From these panchayats thirty beneficiary farmers each were randomly selected. The total number of respondents for the study was 120. The primary data was collected using a pre-tested and structured interview schedule and questionnaire. The secondary data were collected from the State Department of Agriculture and various government websites.

The trend of paddy promotion programmes were analyzed and the components were delineated. The dependent variable perception was divided into different sub dimension based on the paddy promotion schemes implemented. Further the perception of beneficiary farmers and extension personnel on effectiveness of paddy promotion promotion programmes under decentralized planning were studied. The profile characteristics selected were also studied. The factors influencing implementation of the development programmes under Central and State sponsored schemes as well as that in case of decentralized planning were ranked and further a t –test was carried out find out whether any significant difference was present between the two. In addition, the benefits accrued by the beneficiary farmers were also tabulated. Constraints perceived by the beneficiary farmers were ranked using Kruskal Wallis test, and a percentage analysis was carried out in case of extension personnel. Accordingly suggestions were made to improvise the effectiveness of paddy promotion programmes.

The salient findings of the study are summarized and presented below:

- The trend analysis of the amount allotted for agriculture and allied sectors in the Union budget shows that there was an increase in the per cent of share, from 2011- 12 to 2013- 14. Then the drop is sharp for succeeding two years and a slight increase was noticed in the recent year.

- The per cent share of exclusive paddy promotion programmes is showing a decreasing trend even when the total State crop husbandry outlay is showing an increasing trend.
- The analysis of the per cent share allotted for exclusive paddy promotion programmes in the State Plan shows a declining trend, even when the total plan amount is increasing yearly.
- In all the three panchayats more than half of the total allocation given for paddy promotion. It can also be seen that during 2012- 13 and 2013-14 the total allocation was cent percent for paddy promotion in Adat krishi bhavan and so was the case in Arimpur krishi bhavan in the year 2013-14.
- Rashtriya Krishi Vikas Yojana, MOU Rice, Food Security Project were the Centrally sponsored schemes that were implemented during the study period considered.
- Sustainable Development of Rice, ATMA & ATMA Plus were the State sponsored schemes implemented during the time frame.
- Comprehensive Organic based Rice Development Project and paddy cultivation assistance to SC youth were two important schemes implemented under decentralized planning in Adat panchayat.
- Distribution of HYV paddy seed was the only scheme implemented in Arimpur panchayat with seed distribution as the only component except for distribution of knapsack sprayer in 2012-13.
- In Chelakkara different production enhancing materials were distributed each year with seed distribution being the main component.
- Resource aspects was perceived as the most influencing factor, followed by scheme features, beneficiary aspects and leadership style and management

approach of extension personnel in both cases of central and state schemes as well as schemes under decentralized planning.

- Reiterating the factors influencing implementation, t –test results showed a significant difference in case of implementation of Centrally and State sponsored schemes and schemes under decentralized planning.
- Majority of the beneficiary farmers belonged to 'elderly' age group (56 years and above), had high school education, belonged to large family (5 to 6 members), had an annual family income above 1 lakh rupees, and were small and marginal paddy farmers (below 5 acres), and practiced paddy cultivation in their own land.
- The respondents were found to have medium level of economic motivation, risk orientation, mass media exposure, social participation, contact with extension agency, scientific and market orientation.
- The benefits accrued under decentralized planning were listed out and categorized into- socio economic development, asset generation, inputs availed, skill development.
- Kruskal Wallis test was employed to determine, whether there was significant differences between the perception of the beneficiaries from three panchayats
- The result revealed that the beneficiary farmers from Adat panchayat had a greater perception score on the effectiveness of paddy promotion programmes under decentralized planning, followed by Chelakkara panchayat. The result draws special attention to the mean perception score of the beneficiaries of Arimpur panchayat which was very low compared to the beneficiaries of other two panchayats.
- Dimension-wise perception of beneficiary farmers on effectiveness of paddy promotion programmes highlights that beneficiaries of Adat panchayat had higher mean perception towards various aspects viz; agricultural input,

institutional factors, knowledge and empowerment aspects and a lower mean perception towards socio economic aspects.

- Beneficiaries of Arimpur panchayat had moderate mean perception on socio-economic, institutional, and empowerment aspects and comparatively low mean perception on agricultural input aspects and knowledge aspects.
- A high mean perception on socio economic aspects, medium or moderate mean perception on agricultural input aspects and knowledge aspects and low mean perception on institutional and empowerment aspects were exhibited by the beneficiaries of Chelakkara panchayat.
- Majority of the extension personnel (90%) has perceived the effectiveness of paddy promotion programmes implemented under decentralized planning was good and 10 per cent have rated the effectiveness as excellent category.
- More than half of the respondents perceived that the implemented programmes were effective in improving the socio-economic conditions and empowerment of the beneficiary farmers. Most of the respondents had a good perception on agricultural inputs made available through the schemes, institutional support and knowledge management.
- The Kruskal Wallis test results evident that beneficiaries from Arimpur panchayat perceived maximum constraints in the implementation of paddy development programmes, followed by Chelakkara and Adat panchayat.
- The dimension wise constraints perceived indicates that knowledge, financial, time, input, infrastructural, market and scheme feature constraints were the most severe, followed by manpower and input constraints as more severe in Arimpur panchayat.
- Chelakkara panchayat experienced drastic input and manpower constraints followed by time, financial, infrastructural, knowledge and market constraints.
- Beneficiaries of Adat panchayat perceived scheme feature constraints as more severe constraint and other constraints as less severe.

- The major constraints perceived by the extension personnel were manpower constraints i.e., labour shortage and non- availability of adequate implementing officers followed by financial, scheme feature, input, time and infrastructural constraints

- Suggestions to improvise the schemes includes

  - ✓ The yearly financial allocation should be increased
  - ✓ The beneficiary share should be reduced by increasing the subsidy share
  - ✓ More schemes and scheme components including organic components and farm implements distribution should be added
  - ✓ More emphasis to be given on conservation of local varieties
  - ✓ Schemes attracting the women and youth should be included more
  - ✓ Since majority of the farmers fall in marginal and small farmer category, schemes aiming upland and fallow land cultivation should be initiated to bring more area under paddy
  - ✓ The procedure for availing schemes should be simplified
  - ✓ Hire more field officers for regular monitoring of field activities
  - ✓ Strengthen the institutional linkages – Farmers Service Cooperative Banks, input dealers, marketing agents
  - ✓ Promote formation of '*thozhil sena*' groups by *Kudumbashree* members and youth
  - ✓ Strengthening of monitoring systems
  - ✓ Empowerment of office bearers of *padasekhara samithis* and leading farmers through trainings
  - ✓ Create awareness about the features of any particular scheme before the implementation
  - ✓ Steps should be taken for ensuring timely supply of inputs
  - ✓ Selection of beneficiaries and preparation of list should be carried out in *grama sabhas* to avoid delay

- ✓ Include an emergency fund for meeting the unexpected loss due to natural calamity and if not utilized, provision should be made to divert the fund for paddy promotional activities the next year
- ✓ Provision for timely disbursement of procurement price to the farmers
- ✓ Based on the geographical area of the panchayat, adequate number of staff should be made available
- ✓ Merge with Mahatma Gandhi National Rural Employment Guarantee Scheme for ensuring labour supply
- ✓ Formulate projects for financial assistance for establishing infrastructural facilities at Panchayat level
- ✓ Promote schemes on processing and value addition.
- ✓ Promote more capacity building programmes
- ✓ Agro Service Centres can be established under society registration at panchayat level and can act as input and service provider for various agricultural schemes
- ✓ Community level seed bank can be promoted
- ✓ Rice producers company can be suggested in panchayats with steady and large area under cultivation and with aspiring and innovative farmers

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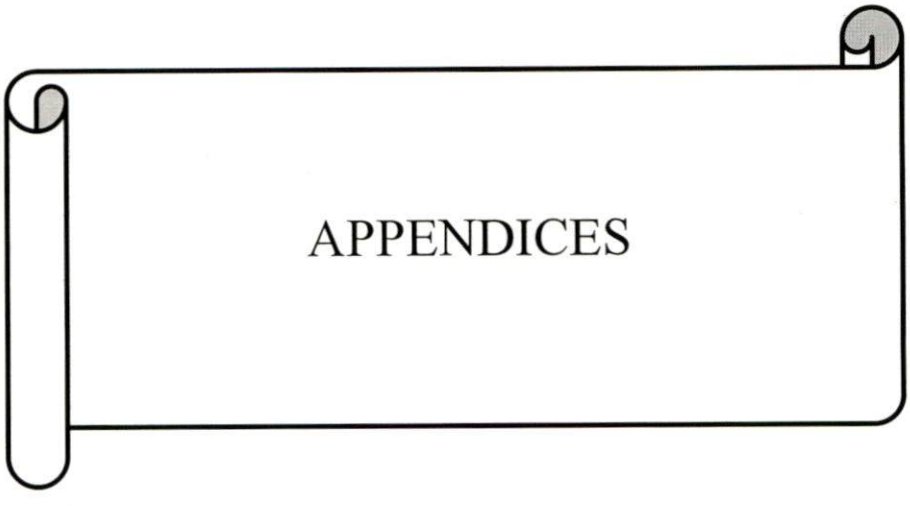

APPENDICES

APPENDIX I - QUESTIONNAIRE FOR BENEFICIARY FARMERS

KERALA AGRICULTURAL UNIVERSITY (KAU)
COLLEGE OF HORTICULTURE
KAU P.O. THRISSUR 680656
Department of Agricultural Extension

ANALYSIS OF DEVELOPMENT PROGRAMMES FOR PADDY PROMOTION UNDER DECENTRALIZED PLANNING IN THRISSUR DISTRICT

The information furnished will be used only for the research purpose and the data will be kept strictly confidential.

Krishi bhavan: ..... **Respondent No:**

PART A (Farmer Profile)

1. Name of the farmer :

2. Contact No :

3. Age (years) :

4. Education : Illiterate / Primary/ High school/ Higher secondary/ Collegiate

5. Family size :

6. Main occupation :

7. Subsidiary occupation: Farm labour/ Business/ Government employee / Private employee

8. Farming experience :
(In Paddy cultivation)

9. Annual income : Up to ₹.50000 / ₹ 50001 – 1 lakh rupees / Above 1 lakh rupees

10. Total Farm size (ha) :

11. Area under paddy cultivation

Sl.no	Particulars	Area (ha)
1	Area owned	
2	Area leased in	
3	Area leased out	

11. Mass media exposure

Sl. no	Mass media	Frequency of usage					
		Daily	2-6 days in a week	once in a week	once in a fortnight	Occasionally	Never
1	Radio						
	a) General programmes						
	b) Agricultural programmes						
2	Newspaper						
3	Television						
	a) General programmes						
	b) Agricultural programmes						
4	Magazines/ bulletins/ leaflets						
5	Internet sources						

12. Social participation

Sl.no	Organisation	Member	Office bearer	Extent of participation		
				Regular	Occasionally	Never
1	Cooperative societies					
2	Kudumbashree units / SHGs					
3	Grama Sabha					
4	Any others					

13. Contact with extension agency

Sl.no	Name of extension agent/ agency	Frequency of contact					
		Two/more times a week	Once in a week	Once in a fortnight	Once in a month	Occasionally	Never
1	ATMA staff						
2	Agriculture Assistants						
3	Agriculture Officers						
4	Agricultural Scientists						
5	Panchayat members						
6	Others						

14. Economic motivation

Sl.no	Statements	SA	A	UD	DA	SDA
1	A farmer should work aiming high yield and economic profit					
2	A successful farmer makes good profit					
3	A farmer should try any new farming idea which may help him to earn more money					
4	A farmer should cultivate cash crops along with food crops for better income					
5	A farmer should develop skills to maximize output with minimum inputs.					

SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

15. Risk orientation

Sl.no	Statements	SA	A	UD	DA	SDA
1	A farmer should grow commercial crops to avoid greater risk involved in growing food crops					
2	A farmer who is willing to take risk does better financially					
3	It is good for a farmer to take calculated risk when he knows his chance of success is fairly high					
4	It is better for a farmer not to try new farming method unless most other farmers have used it with success					
5	It is better to try an entirely new method in farming involving risk					

SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

16. Scientific orientation

Sl.no	Statements	SA	A	UD	DA	SDA
1	New methods of farming gives better results to a farmer than the old methods					
2	Traditional methods are still the best way to farm today					
3	Even a farmer with lot of experience should use new methods of farming					
4	Though it takes time for a farmer to learn new methods in farming it is worth the efforts					
5	A good farmer experiments with new ideas in farming					

SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

17. Market Orientation

Sl.no	Statements	SA	A	UD	DA	SDA
1	A farmer can get good price through value addition					
2	A farmer can get good price by grading his products					
3	Farmers are ready to wait for better price, provided they have better storage facility					
4	Market is the most important component as far as the farmer is concerned					
5	One should grow those crops which have more market demand					
6	One should cultivate those varieties which have more market demand					
6	Formation of niche market can help farmers to get more profit					
7	A farmer can get high price by following quality standards					
8	One should follow suitable planting time based on the market demand					

SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

PART B

Perception of beneficiary farmers on effectiveness of paddy promotion programmes under decentralized planning (Dependent Variable)

Sl. No	Statements	SA	A	UD	DA	SDA
I	**Socio -economic development**					
	a) Schemes were relevant to the situation and addressed the immediate need of the farmer					
	b) As a result of the schemes, paddy production and productivity increased considerably					
	c) The profit from paddy cultivation increased due to reduction in cost of cultivation					
	d) Provision for meeting labour charge helped to cope up with prevailing cost of paddy farming					
	e) Standardized cultivation practices as envisaged by the scheme helped to avoid the unnecessary cost incurring while cultivation of paddy					
II	**Agricultural inputs supply**					
	a) Inputs were not available on time					
	b) Quality of inputs distributed through the schemes was satisfactory.					
	c) The quantity of inputs supplied through the scheme failed to meet the demand requirement from farmers					
	d) Implementation of scheme increased the usage of organic inputs					
	e) Implementation of scheme increased the usage of fertilizers					
	f) Implementation of scheme increased the usage of plant protection chemicals					
	g) Implementation of scheme increased the usage of botanicals for plant protection					
	h) Plant protection chemicals made available through the schemes were highly useful (Control pest, diseases and weeds in paddy)					
	i) Plant protection botanicals made available through the schemes were highly useful (Control pest, diseases and weeds in paddy)					

III	**Institutional support**					
	a) Aided the farmers for market led paddy farming					
	b) Padashekhara samities constituted helped in tackling the problems of rice cultivation					
	c) Expert guidance during various stages of paddy cultivation was lacking					
IV	**Knowledge enhancement**					
	a) Improvement in attitude towards natural resource management especially wetland conservation					
	b) Improved awareness and knowledge on reclamation of paddy land					
	c) Attitude towards conversion of paddy field to other commercial crop cultivation decreased					
	d) Schemes encouraged adoption of scientific cultivation practices					
	e) Developed more awareness and interest towards organic rice cultivation					
	f) Developed interest towards natural resource management and wetland conservation					
V	**Empowerment perspective**					
	a) Recognition to best paddy farmers and padasekharams enhanced the motivation among the farming community					
	b) Generated various assets for common usage of members of padasekharams like knapsack sprayers, pump sets, power tillers and tractors					
	c) Scheme helped in mechanization of operations which leading to higher productivity of labour					
	d) Aroused interest among farmers about paddy schemes					
	e) Revitalization of group farming activities through various operational supports to padasekharams					

SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

PART C
Benefits accrued by farmers

Sl.no	Benefits accrued	Yes	No	Specify
1	**Socio - economic development**			
	a) Increased income from farm			
	b) Employment to family members or others			
	c) Assistance provided helped to reduce cost of production			
	d) Brought fallow land under paddy cultivation			
	e) Developed interest to continue as the member of padashekhara samiti			
2	**Asset generation**			
	a) Knapsack sprayer			
	If any others :			
3	**Inputs supply**			
	b) HYV seeds			
	c) Organic manures			
	d) Chemical fertilizers			
	e) Green manures			
	f) Soil ameliorants			
	g) Plant protection chemicals			
	h) Bio control agents			
	If any others :			
4	**Skill development**			
	a) Identification pest, disease, weed			
	b) Operation of equipment and machineries like sprayers, power tiller, cono weeder			
	c) Promoted group dynamics among farmers			
	d) Increased knowledge on new technologies			
	If any others :			

PART D
Constraints felt by beneficiary farmers

Sl. No	Statements	MF	MOF	LF	Reason
1	**Input constraints**				
	a) Inadequate supply of inputs				
	b) Lack of good quality				
	c) Water scarcity				
2	**Time constraints**				
	a) Insufficient finance				
	b) Lack of timely availability of inputs				
	c) Lack of timely monitoring				
3	**Financial constraints**				
	a) Lack of proper financial assistance				
	b) High labour cost				
	c) High cost of plant protection chemicals				
	d) Delay in receiving payment				
4	**Infrastructure support constraints**				
	a) Size of land holdings				
	b) Lack of energy resources needed for farming				
	c) Lack of storage facility				
	d) Lack of logistics facilities				
5	**Manpower constraints**				
	a) Labour shortage				
	b) Shortage of Officers				
6	**Knowledge constraints**				
	a) Lack of technical know how				
	b) Lack of knowledge about plant protection chemicals				
	c) Lack of scientific cultivation practices				
7	**Market constraints**				
	a) Lack of assistance in procurement				
	b) Lack of assistance in timely marketing of paddy				
	c) Problems in marketing channels				
	d) Delay in receiving payment				

8	**Scheme feature constraints**				
	a) Complexity involved in availing the scheme				
	b) Lack of components in scheme addressing crop loss due to various climate vagaries				
	c) Absence of programmes promoting cultivation of indigenous / local varieties				
	d) Lack of training programmes in value addition activities.				
	e) Lack of skill development trainings				
Others, if any:					
Suggestions to overcome constraints					

*MF = Most felt; MOF = Moderately felt; LF = Less felt

APPENDIX II – QUESTIONNAIRE FOR EXTENSION PERSONNEL

KERALA AGRICULTURAL UNIVERSITY (KAU)
COLLEGE OF HORTICULTURE
KAU P.O. THRISSUR 680656
Department of Agricultural Extension

ANALYSIS OF DEVELOPMENT PROGRAMMES FOR PADDY PROMOTION UNDER DECENTRALIZED PLANNING IN THRISSUR DISTRICT

The information furnished will be used only for the research purpose and the data will be kept strictly confidential.

PART A (Profile of the extension personnel)

1. **Name of the officer** :

2. **Contact No** :

3. **Educational qualification** :

4. **Designation / Post** :

5. **No of years of experience** :

6. **Special schemes operated during your service in this particular Block/ Panchayat** :

PART B

Perception of extension personnel on effectiveness of paddy promotion programmes under decentralized planning (Dependent Variable)

Sl. No	Statements	SA	A	UD	DA	SDA
I	**Socio -economic development**					
	f) Schemes were relevant to the situation and addressed the immediate need of the farmer					
	g) As a result of the schemes, paddy production and productivity increased considerably					
	h) The profit from paddy cultivation increased due to reduction in cost of cultivation					

	i) Provision for meeting labour charge helped to cope up with prevailing cost of paddy farming					
	j) Standardized cultivation practices as envisaged by the scheme helped to avoid the unnecessary cost incurring while cultivation of paddy					
II	**Agricultural input supply**					
	j) Inputs were not available on time					
	k) Quality of inputs distributed through the schemes was satisfactory.					
	l) The quantity of inputs supplied through the scheme failed to meet the demand requirement from farmers					
	m) Implementation of scheme increased the usage of organic inputs					
	n) Implementation of scheme increased the usage of fertilizers					
	o) Implementation of scheme increased the usage of plant protection chemicals					
	p) Implementation of scheme increased the usage of botanicals for plant protection					
	q) Plant protection chemicals made available through the schemes were highly useful (Control pest, diseases and weeds in paddy)					
	r) Plant protection botanicals made available through the schemes were highly useful (Control pest, diseases and weeds in paddy)					
III	**Institutional support**					
	d) Aided the farmers for market led paddy farming					
	e) Padashekhara samities constituted helped in tackling the problems of rice cultivation					
	f) Expert guidance during various stages of paddy cultivation was lacking					
IV	**Knowledge enhancement**					
	g) Improvement in attitude towards natural resource management especially wetland conservation					
	h) Improved awareness and knowledge on reclamation of paddy land					

	i) Attitude towards conversion of paddy field to other commercial crop cultivation decreased					
	j) Schemes encouraged adoption of scientific cultivation practices					
	k) Developed more awareness and interest towards organic rice cultivation					
	l) Developed interest towards natural resource management and wetland conservation					
V	**Empowerment perspective**					
	f) Recognition to best paddy farmers and padasekharams enhanced the motivation among the farming community					
	g) Generated various assets for common usage of members of padasekharams like knapsack sprayers, pump sets, power tillers and tractors					
	h) Scheme helped in mechanization of operations which leading to higher productivity of labour					
	i) Aroused interest among farmers about paddy schemes					
	j) Revitalization of group farming activities through various operational supports to padasekharams					

*SA= Strongly Agree; A=Agree; UD=Undecided; DA=Disagree; SDA= Strongly disagree

PART C

Factors influencing the implementation of centrally sponsored and state schemes

Sl. no	Factors	Centrally & State sponsored schemes			Schemes under decentralized planning		
		MI	SWI	NI	MI	SWI	NI
1	**Planning**						
	a) Formulation of projects						
	b) Selection of beneficiaries						
	c) Output assessment						
	d) Fund requirement						
	e) Labour budgeting						
2	**1. Implementation**						
	1.1. Leadership style and management approach of extension personnel						
	f) Adherence to time schedule						
	g) Adherence to scientific implementation						
	h) Adherence to government orders						
	i) Experience of Officers						
	j) Availability of Officers						
	1.2. Resource aspects						
	j) Timely release of fund						
	k) Timely availability of inputs						
	l) Timely technical support						
	m) Adequate quantity of inputs						
	n) Quality of the inputs supplied						
	o) Availability of institutional facilities						
	p) Storage life of inputs						
	q) Availability of storage facilities for inputs supplied						
	r) Transportation cost involved						
	1.3. Beneficiary aspects						
	g) Coordination among members of padashekara samithi						

	h) Leadership in effective management of programmes						
	i) Improved group dynamics among the members in padashekara samithi						
	j) Personal conflicts among the members						
	k) Political interventions leading to conflicts						
	l) Knowledge on Paddy promotion programmes						
	1.4. Scheme features						
	d) Inclusion of all sectors of farmers						
	e) Trainings given for beneficiaries						
	f) Subsidy given						
3	**Monitoring**						
	a) Adherence to monitoring interim schedule						
	b) Monitoring physical achievement						
	c) Monitoring financial achievement						
	d) Reporting of progress						
	e) Rectifying problems						
4	**Evaluation**						
	a) Assessment of physical achievement						
	b) Assessment of financial achievement						
	c) Completion of project on time						
	d) Follow up of implemented schemes						
Other factors, if any:							

* MI = Most influenced; SWI = Somewhat influenced; NI = Not influenced

PART D
Constraints felt by extension personnel

Sl. No	Statements	MF	MOF	LF	Reason
1	**Input constraints**				
	d) Inadequate supply of inputs				
	e) Lack of good quality				
	f) Water scarcity				
2	**Time constraints**				
	d) Insufficient finance				
	e) Lack of timely availability of inputs				
	f) Lack of timely monitoring				
3	**Financial constraints**				
	a) Lack of proper financial assistance				
	b) High labour cost				
	c) High cost of plant protection chemicals				
	d) Delay in receiving payment				
4	**Infrastructure support constraints**				
	a) Size of land holdings				
	b) Lack of energy resources needed for farming				
	c) Lack of storage facility				
	d) Lack of logistics facilities				
5	**Manpower constraints**				
	c) Labour shortage				
	d) Shortage of Officers				
6	**Scheme feature constraints**				
	f) Complexity involved in availing the scheme				
	g) Lack of components in scheme addressing crop loss due to various climate vagaries				
	h) Absence of programmes promoting cultivation of indigenous / local varieties				
	i) Lack of training programmes in value addition activities.				
	j) Lack of skill development trainings				
Others if any:					

Suggestions to overcome constraints					

*MF = Most felt; MOF = Moderately felt; LF = Less felt

APPENDIX III: INTRODUCTORY LETTER TO JUDGES FOR JUDGES RATING

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COLLEGE OF HORTICULTURE, VELLANIKKARA
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DEPARTMENT OF AGRICULTURAL EXTENSION

Dr. Mercykutty M.J.
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(Major Advisor)
Email: mjmercyg@gmail.com
Mobile no: 9497836915

Dear Sir/ Madam

I am pleased to inform that Ms. Salpriya Seby, Msc student of Department of Agricultural Extension has taken up a research study on "Analysis of development programmes for paddy promotion under decentralized planning in Thrissur district", under my guidance. The main objective of the research work is to study the perception of beneficiary farmers and extension personnel on the effectiveness of paddy promotion programmes under decentralized planning. It also aims to identify the factors influencing the implementation by the extension personnel and the constraints faced.

In light of your vast knowledge and experience, we request you to be a judge for rating the relevancy of the variables enlisted in the enclosed appendix. I request you to indicate the appropriate variable and statements that are to be included in the study by marking (✓) in the relevant column. You can also suggest variables which you feel important for the study and also rate them under appropriate column.

With utmost concern of your busy schedule, I request you to spare your valuable time for us. Your kind and quick response will help us to complete the study in time.

Thanking you,

Yours faithfully,

Mercykutty, M.J

APPENDIX IV: LIST OF VARIABLES AND PERCEPTION STATEMENTS GIVEN FOR JUDGES RATING

Title of study: Analysis of development programmes for paddy promotion under decentralized planning in Thrissur District

Objectives

1) To study the perception of beneficiary farmers and extension personnel on the effectiveness of programmes under decentralized planning.

2) To identify factors influencing the implementation of paddy promotion schemes.

3) To identify the constraints faced by extension personnel and beneficiary farmers.

I. Operationalisation of independent variables:

Following are the independent variables identified for the study. Please mark (✓) the relevancy of including the variables in terms of MOR- Most Relevant, MR- More Relevant, R- Relevant, LR- Less Relevant, LER- Least Relevant and NR- Not Relevant against the appropriate column.

Sl. no	Variables	MOR	MR	R	L R	LER	N R
1	**Age:** Refers to the number of years completed by the farmers at the time of interview.						
2	**Educational status:** The extent of literacy obtained by the respondent at the time of study.						
3	**Gender:** Whether the respondent is male or female.						
4	**Caste:** The religious beliefs followed by the individual.						
5	**Marital status:** Whether the respondent is married or not married.						
6	**Family type:** Refers to whether the family is nuclear/ joint type.						
7	**Family size:** The number of members in the family living together.						

8	**Occupation:** The present major employment or job of the respondent.						
9	**Subsidiary occupation:** The occupation other than the main occupation of paddy cultivation.						
10	**Farm size:** The total area of cultivated land possessed by the farmers at the time of conducting survey.						
11	**Farming experience:** The number of years completed since the respondent gets actively involved in paddy cultivation.						
12	**Annual income:** The total earning of the farmer and the members of the family in a year from the farm and other sources in rupees.						
13	**Indebtedness:** The total debt in terms of money as respondents owes to various money lending source.						
14	**Mass media exposure:** Degree to which the farmer utilized different mass media sources for information.						
15	**Cosmopoliteness:** The degree to which an individual's orientation is external to a particular social system.						
16	**Contact with extension agency:** The degree to which one has contact with or knows various extension personnel.						
17	**Extension participation:** Participation of farmers in various extension activities after giving due consideration for the frequency of participation.						
18	**Social participation:** Degree of involvement of respondent in formal organization either as a member or an office bearer.						
19	**Risk orientation:** The degree to which a farmer is oriented to risk and uncertainty and has courage to face the problems in farming.						
20	**Political orientation:** How far the farmer feels the involvement of politics in the						

	implementation of paddy development programmes.						
21	**Scientific orientation:** the degree to which a farmer is oriented to the use of scientific methods in decision making and in farming.						
22	**Market orientation:** the degree to which the farmer is oriented towards the market in terms of demand and price of his produce.						
23	**Leadership quality:** the ability of the farmer to influence others to cooperate in the attainment of a goal.						
24	**Economic motivation:** the extent to which the farmer is oriented towards profit maximization and relative value he places on monetary gains.						
25	**Achievement motivation:** the striving of the respondent to do good work and attain a sense of accomplishment.						

II. Perception of farmers and extension personnel on effectiveness of paddy promotion programmes under decentralized planning (Dependent Variable)

Possible statements to measure the perception of beneficiary farmers and extension personnel on effectiveness of paddy promotion programmes implemented through their respective Krishi bhavans are listed below. Please mark (✓) the relevancy of including the statements in measuring the perception of beneficiary farmers and extension personnel in terms of MOR- Most Relevant, MR- More Relevant, R- Relevant, LR- Less Relevant, LER- Least Relevant and NR- Not Relevant against the appropriate column.

Sl. No	Statements	MOR	MR	R	LR	LER	NR
1	Schemes were relevant to the situation and addressed the immediate need of the farmer.						
2	As a result of the schemes, paddy production and productivity increased considerably.						
3	The profit from paddy cultivation increased resulting in increased returns.						
4	Allotment of Supplementary income sources to rice farmers helped to sustain paddy farming and improve total income of the farm family.						
5	Fallow land cultivation helped to bring more area under paddy.						
6	Non availability of inputs like seeds, fertilizers on time.						
7	Quality of inputs distributed through the schemes was satisfactory.						
8	The quantity of inputs supplied through the scheme failed to meet the demand from farmers.						
9	Implementation of scheme increased the usage of inputs like organic manure, fertilizers and plant protection chemicals by the farmers.						
10	Various incentives like provision for meeting labor charge helped to cope up with prevailing cost of paddy farming.						
11	Plant protection chemicals made available through the schemes helped greatly to control pest, diseases and weeds in paddy.						
12	Paddy development agencies constituted helps in tackling the problems of rice cultivation.						
13	Additional infrastructure facilities for strengthening of bunds, cleaning of rivers and						

	ponds were provided to augment paddy cultivation.						
14	Created awareness about the role of soil nutrients.						
15	Assistance was provided to the farmers to check the soil status and take necessary remedial measures.						
16	Frequent and constant expert assistance to the farmers during various stages of paddy cultivation was lacking.						
17	Submission of various documents for availing schemes made the procedure complex.						
18	Various trainings conducted helped to improve their technical skills in carrying out different operations.						
19	Generated various assets like knapsack sprayers, pump sets, power tillers and tractors for the padasekharam.						
20	Promotion of mechanized farming helped to address the problem of labor shortage.						
21	Credit availability was made easier.						
22	Scheme helped in mechanization of operations which leading to higher productivity of labor.						
23	Tackled problem of unemployment.						
24	Schemes attracted youth and women groups to take up paddy cultivation.						
25	Aroused interest among farmers about paddy schemes.						
26	Conversion of paddy field to other commercial crop cultivation decreased.						
27	Schemes helped to follow scientific cultivation practices.						
28	Developed more awareness and interest towards organic rice cultivation.						
29	Popularization and promotion of special rice varieties among the farmers.						
30	Revitalization of group farming activities through various operational supports to padasekharams.						
31	Provision for paddy procurement at reasonable price was arranged.						
32	Quality deterioration of inputs is severe due to lack of proper input storage infrastructures						
33	Processing mills were established for producing value added products.						

34	Failed to provide provision for indigenous paddy seed collection and conservation.						
35	Improved awareness and knowledge on reclamation of paddy land.						
36	Recognition to best paddy farmers and padasekharams enhanced the motivation among the farming community.						
37	Aided the farmers for market led paddy farming.						
38	Improvement in quality of produce.						
39	Padaekhara samithies became highly functional due to active involvement of members.						
40	Improvement in attitude towards natural resource management especially wetland conservation						
41	Standardized cultivation practices adopted by the members of the padashekara samities / group farming helped to avoid the unnecessary cost incurring while cultivationg paddy.						
42	Production subsidies given to the farmers are less compared to the eco services rendered by paddy fields.						
43	Lack of proper climate vagaries mitigation component / lack of components addressing loss of crop due to various climate vagaries						
44	Lack of suitable land holdings						

Date :

Signature:
Name:
Designation:

APPENDIX V: PHOTOS TAKEN DURING DATA COLLECTION

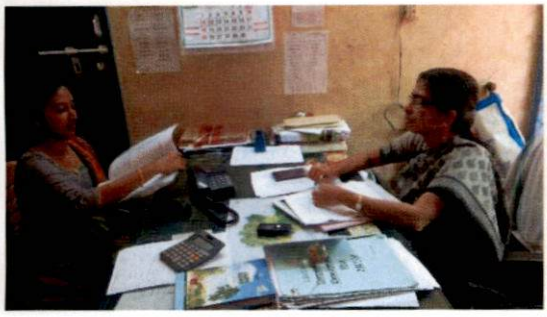
Plate 1. Survey of beneficiary farmers

(a) Survey of Adat farmers

(b) Survey of Arimpur farmers

(C) Survey of Chelakkara farmers

Plate 2: Photos taken during the survey of Extension personnel



ADA, Puzhakkal

Agricultural Officer, Adat

Agricultural Officer, Kolazhy

Agricultural Officer, Aiyyanthole

(a) Survey of.extension personnel – Puzhakkal block

ADA, Anthikkad

Agricultural Officer, Manalur & in charge, Arimpur

(b) Survey of extension personnel – Anthikkad block

ADA, Pazhayannur

Agricultural Officer, Chelakkara

Agricultural officer, Pazhayannur

(C) Survey of extension personnel – Chelakkara block

ANALYSIS OF DEVELOPMENT PROGRAMMES FOR PADDY PROMOTION UNDER DECENTRALIZRD PLANNING IN THRISSUR DISTRICT

By

Salpriya Seby

(2015-11-057)

ABSTRACT OF THE THESIS

Submitted in partial fulfillment of the

requirement for the degree of

Master of Science in Agriculture

Faculty of Agriculture

Kerala Agricultural University, Thrissur

DEPARTMENT OF AGRICULTURAL EXTENSION

COLLEGE OF HORTICULTURE

VELLANIKKARA, THRISSUR- 680656

KERALA, INDIA

2017

ABSTRACT

Agricultural development programmes are aimed at increasing food supply to feed the rapidly expanding population. The major challenge faced by the Government is to increase the agricultural production with limited natural resources in a sustainable manner for ensuring food security and providing income security to the farmers. With an objective to meet the growing demand for rice through increasing the rice production, the Government has been implementing various programmes. Simultaneously it is important that these programmes should be successful to the fullest in terms of achieving goals since, huge amount of money is spent on the same. Keeping these issues in view, the study entitled "Analysis of development programmes for paddy promotion under decentralized planning in thrissur district" has been framed.

The present research work was taken up to study the trend of paddy promotion programmes and to delineate the components. The study has also analysed the perception of beneficiary farmers and extension personnel on the effectiveness of paddy promotion programmes under decentralized planning and the factors influencing the implementation. Apart from this the benefits and constraints of the programme were also analysed. For this, ninety beneficiary farmers of paddy promotion programmes under decentralized planning from three panchayats *viz*; Chelakkara, Arimpur and Adat were selected as the farmer respondents. Thirty extension personnel from the corresponding three blocks *viz*; Pazhayannur, Anthikkad and Puzhakkal constituted the other category of respondents. The secondary data were collected from the State Department of Agriculture and various government websites.

The trend analysis of the amount allotted for agriculture and allied sectors in the Union budget shows that there was an increase in the per cent of share, from 2011- 12 to 2013- 14. Then the drop is sharp for succeeding two years and a slight increase was noticed in the recent year. The per cent share allotted for paddy promotion schemes in State plans showed a declining trend and a slight fluctuation was observed in the case

of Thrissur district. The analysis of the financial allocations given to the three panchayats revealed that more than half of the total financial outlay has been utilized for paddy promotion programmes.

The major paddy promotion schemes that had been implemented through Krishibhavans were identified as Rashtriya Krishi Vikas Yojana, MOU Rice, Food Security Project as the Centrally sponsored schemes; Sustainable Development of Rice, ATMA & ATMA Plus as the State sponsored schemes. Under decentralized planning, Comprehensive Organic based Rice Development Project and paddy cultivation assistance to SC youth in Adat panchayat ; Distribution of HYV paddy seed in Arimpur panchayat and in Chelakkara different schemes were identified and all these were delineated. The schemes under decentralized planning varied among the panchayats, whereas the same Centrally and State sponsored schemes were implemented in all the three panchayats.

Resource aspects was perceived as the most influencing factor, followed by scheme features, beneficiary aspects and leadership style and management approach of extension personnel in both cases of central and state schemes as well as schemes under decentralized planning.

Profile of the beneficiary farmers were noted down. Majority of the beneficiary farmers belonged to 'elderly' age group (56 years and above), had high school education, belonged to large family(5 to 6 members), had an annual family income above 1 lakh rupees, and were small and marginal paddy farmers (below 5 acres), and practiced paddy cultivation in their own land. The respondents were found to have medium level of economic motivation, risk orientation, mass media exposure, social participation, contact with extension agency, scientific and market orientation.

The benefits accrued under decentralized planning were listed out and categorized into- socio economic development, asset generation, inputs availed, skill development.

Kruskal Wallis test was employed to compare the perception of the beneficiary farmers on the effectiveness of paddy promotion schemes under decentralized planning. It was found that the farmers of Adat, Chelakkara and Arimpur panchayats had high, medium and low levels of perception respectively. Further, dimension wise perception was analysed and the panchayats were ranked accordingly. Majority of the extension personnel perceived the effectiveness of the programmes as good.

Constraint analysis revealed that the beneficiaries of Arimpur panchayat experienced more number of constraints, followed by Chelakkara and Adat panchayats. The severity varied among the panchayats. The extension personnel perceived constraints in manpower as the most important one. The suggestions include increasing the number of components implemented and enhancing the subsidy amount under each comprehensive scheme with capacity building at different levels. For addressing the manpower constraints, at the institutional level appointment of more staff based on the geographical area of the panchayat and at field level, merging with Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) are proposed. The persistent problem of timely seed availability may be addressed by devising innovative measures at local level as far as possible.

In a nutshell, the paddy promotion programmes implemented under decentralized planning augmented sustainable rice farming. However, the effectiveness can be enhanced by rectifying the existing lacunae.