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A STUDY ABOUT DIFFICULTIES FACED BY PADDY FARMERS IN CHEMPUMPURAM HAMLET OF KUTTANAD TALUK

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CHAPTER - I
INTRODUCTION
1.1 INTRODUCTION

Agriculture has a very important role in Kerala economy. It is important to have a clear picture of the performance of agriculture in the past and present for a proper understanding of the economy. Kerala produces only far less than its annual requirement of rice thereby remaining a deficit State. The area under paddy cultivation has been continuously declining at an alarming rate over the years, particularly since 1975-76. Rice being the staple food of people in Kerala, an enquiry into the problems faced in paddy cultivation is very important.

Kuttanad and Palakkad are the two major rice producing areas in Kerala. Geographically Kuttanad is a large patchwork of fragmented landscape, marked by rivers, extensive number of paddy fields, backwaters, swampland, ponds, coconut groves and a network of canals. The history of paddy cultivation in Kuttanad can be dated back to centuries.

The paddy fields of Kuttanad are regionally known by the name puncha vayal. These paddy fields are set up in three types of land: Karapadam (upland rice fields), Kayal (wetland rice fields) and Kari (land buried with black coal like materials). The paddy fields of Kuttanad with coconut trees on bunds and traversed by canals offer an agreeable sight. In 2013 the Food and Agriculture Organization (FAO) of the United Nations formally proclaimed the below sea-level farming system in Kuttanad as Globally Important Agricultural Heritage Systems (GIAHS). This reputable Heritage Status is a true acceptance of the traditional and indigenous farming practices of Kuttanad. (Rajalakshmy, 2006)

1.2 STATEMENT OF THE PROBLEM

Chempumpuram is a small hamlet in Nedumudy village of Kuttanad Taluk. Agriculture is the main occupation of the majority of population in Chempumpuram. The total area of the village/ hamlet is 2023 hectares. The population of the hamlet is 14,601. According to Census (2011), in Nedumudy village out of total population, 5690 were engaged in work activities. 64.52 % of workers describe their work as Main Work (Employment or earning more than 6 Months). While 35.48 % were involved in Marginal activity providing livelihood for less than 6 months. Of 5690 workers engaged in Main Work, 3350 were cultivators (owner or co-owner) while 1014 were Agricultural labourers. This hamlet comes under Nedumudy Krishi Bhavan. There were 3668 households in Nedumudy village. There are 6 registered padashekara samitis in this hamlet. A padashekara samiti is a recognized association of paddy farmers in each village. The people of the village depend heavily on paddy farming for their livelihood. The paddy cultivation rely on different aspects, such as climatic conditions, attitudes of different social groups of farmers to agriculture and use of irrigation. Moreover seeds, fertilizers, pesticides and insecticides, by which production be enhanced. The impact of these aspects of agriculture varies in different areas of the panchayat. Hence it is important to understand the problems faced by paddy farm sector and the farmers. In addition to this duck farming, livestock and banana cultivation are also being taking part in the lands of Chempumpuram.

In Chempumpuram there is a public health center known as CHC. Two schools in Chempumpuram are Government lower primary school and Chempumpuram upper primary school. For potable drinking water a Reverse Osmosis Plant is available at Chempumpuram. In addition to this,

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there is a rice research station is near to Chempumpuram (5.6 km) which is known as Mankombu Rice Research station. In Google maps the location of Chempumpuram can be viewed at https://goo.gl/maps/KvhKQ4og6qBBw4jK6

1.3 SIGNIFICANCE OF THE STUDY

To identify the current problems of paddy cultivation in Kerala I have conducted a field study in Chempumpuram hamlet of Kuttanad Taluk. .Kuttanad is also known as the 'Rice Bowl 'of Kerala. At present the paddy farm sector in the study area is on the verge of a serious crisis. Farmers are facing problems like non availability of required number of laborers and decline in the profitability of crop. In addition to this lack of proper marketing facilities and recurring crop failures are also some problems. This has been quite disappointing. In this background the present study is a micro level attempt to identify the current problems in the paddy farm sector and to suggest remedial measures for its revival.

1.4 OBJECTIVES OF THE STUDY

- To examine the problems faced by cultivators
- To analyze the existence of intermediaries
- To assess the impact of government policies
- To assess the impact of climate change and flood
- To make suggestions for betterment of cultivation

CHAPTER II
MATERIALS & METHODS

2.1 METHODS

The results and data presented in this research paper are part of a study on paddy farmers of Chempumpuram hamlet in Kuttanad. As mentioned in the introductory chapter the main objectives of the research is to examine the problems faced by cultivators and to analyze the existence of intermediaries. Additionally, to assess the impact of government policies and to assess the impact of climate change and flood to make suggestions for betterment of cultivation.

2.2 Sample Group & Interview

The study area is Chempumpuram locality of Kuttanad taluk in Alappuzha district. A sample of 50 farmers is collected randomly from ward 14 and 15 of Chempumpuram village. The interview questions were prepared before the farmers were selected for the direct interview and were centered with the objectives outlined in chapter 1. The interview consisted of 7 questions, out of which 5 questions were mandatory. All the 7 questions were simple and farmers can easily answer all the questions. The interview for the farmers were conducted on 8th and 9th days of August 2020. On 8th August the interview was for paddy farmers in ward 15 and the interview was started almost by 10 am. On that day 25 paddy farmers were interviewed and 23 paddy farmers participated actively. By 5 pm the interview was finished. On the following day (9th August) the interview was conducted for paddy farmers in ward 16 from 9.30 am to 3 pm. In ward 16, 25 paddy farmers were interviewed and 24 farmers participated in the interview actively.

2.3 Primary & Secondary data

Both primary data and secondary data have been used in the entire analysis. Primary data have been collected through questionnaire and personal interview method. The secondary data have been taken from various scholarly articles, newspapers, journals and from the internet. In this study, percentages, graphs etc. are used and also software like excel to analyze the primary data.

CHAPTER – III
PADDY CULTIVATION: AN OVERVIEW

3.1 PADDY CULTIVATION IN INDIA

Rice is the staple food of India and each day lots of Indians relish comfort in it. The word rice finds its origin within the Tamil word 'Arisi'. With a high sugar content, it's acknowledged to produce instant energy and may be a staple that is consumed by the majority of India's population. Therefore the importance of rice crop within the country cannot be negated. There are various types of rice varieties that are consumed in our country which includes basmati, white, brown, red, jasmine, sticky rice etc. Of these, basmati and white rice are the one that are most favored in the country. Rice is an adaptable crop and can be cultivated in a variety of climates, be it plains, or the mountain. It can be grown as a kharif crop or a Rabi crop. In India, rice is grown in almost all states. West Bengal leads the way in terms of production with 16.1 million tons. This is followed by Uttar Pradesh with 12.22 million tons and Andhra Pradesh with 11.57 million tons as per the Agricultural statistics 2018-19.

3.2 PADDY CULTIVATION IN KERALA

Rice is the staple food of the people of Kerala. Cultivation of rice has occupied pride of place within the farming economy of Kerala. The lush paddy fields are one amongst the foremost charming scenarios of Kerala's landscape. The area under paddy cultivation intensified well throughout the initial fifteen years of the State's formation. It increased from 760,000 hectares in 1955–56 to 880,000 hectares in 1970–71.

In 1965–66, rice accounted for the very best share of gross cropped space in Kerala (32 per cent of the total). There was however, a sharp decline within

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the area under rice cultivation from the 1980s onwards. It declined from 850,000 hectares in 1980–81 to 560,000 hectares in 1990–91, and 320,000 hectares by 1997. Today, rice occupies only the third position among Kerala's agricultural crops with relation to area under cultivation. It is much behind coconut and rubber.

A reversal of the trend of sharp decline in paddy cultivation in Kerala, is critical for two reasons. First, because as the Government of Kerala's Economic Review 2010 notes, food grains produced in Kerala account for only 15 % of its total consumption of food grains. Kerala imports food grains from Tamil Nadu, Andhra Pradesh, Madhya Pradesh and Gujarat to completely meet the consumption requirements.

Secondly, paddy fields are an important part of Kerala's setting and ecological systems. They provide natural evacuation methods for flood waters and conserve H2O. They are also crucial for the preservation of a fashionable type of flora and fauna.

Palakkad and Alappuzha are the two major rice-producing districts of Kerala. While the Kuttanad region in Alappuzha is endowed with a large system of backwaters. Agriculture in Palakkad benefits from irrigation projects in Malampuzha, Chulliar, Meenkara, Walayar, Pothundi, Mangalam and Parambikkulam. In Palakkad district, Chittur, Alathur, Kuzhalmannam, Kollengode, Nenmara and Palakkad are the blocks in which paddy production is taking place. The operational holding usually includes self-owned land, land closely-held by relatives and leased-in land. Productivity in rice cultivation is comparatively high in this region. Farmers and Krishi Bhavan (agricultural help office) officers observe that yield levels of 3000 kg/hectare are quite common in this region. It is above the State-wide average (2,557 kg/hectare). (Lamb, 2011)

3.3 PADDY CULTIVATION IN KUTTANAD

Kuttanad, the 'Rice Bowl of Kerala', lies in the very heart of the Alappuzha district backwaters. What got this unique nickname is its wealth of paddy crops. Based in the inner regions of the district, it is a huge area of reclaimed land, separated by dikes from water which is higher than it appears. The countryside view is what enchants all those who pass through this area as they travel through houseboats. It has been speculated that it is perhaps the only place in the world where farming is done up to 2 meters below sea level. (Department of Tourism, Kerala)

Kuttanad is broadly divided into Lower Kuttanad (Taluks of Ambalapuzha and Kuttanad in Alappuzha district), Upper Kuttanad (some parts of Kuttanad, and Karthikapally Taluks in Alappuzha district, western parts of Tiruvalla taluk in Pathanamthitta district), and North Kuttanad (Taluks of Vaikom, and western parts of Changanacherry and Kottayam taluks in Kottayam district.) The total area of Kuttanad region is 79000 hectares. 66000 hectares are wetlands. The remaining 13000 hectares are water areas comprising of lakes, rivers, waterways and channels. Dry lands that lie 0 .5 to 2.5 meters on top of the Mean Water Level (MSL) are principally situated at the peripheral areas of the region .Wet lands consists of the low lying areas slightly on top of the MSL. The areas lying up to 2.5 meters below the MSL that are rescued from the Vembanad lake.

Compared to alternative paddy growing areas in Kerala, paddy cultivation in Kuttanad region has several distinctive characteristics. Paddy lands in this region are divided into contiguous blocks (referred to as padasekharams) certain by waterways, rivers and alternative natural partitions. Many of such padasekharams are natural within the sense that they're reclaimed lands from the bed of backwaters. Hence it's same that 'while God created earth, man created Kuttanad'. The size of padasekharams ranges from about one square measure to over one thousand hectares. In this region there are 1231 padasekharams covering a complete space of 59375 hectares.

Puncha crop (summer crop) is the traditional crop in Kuttanad. This season begins from October-November once the operation of bailing out water from padashekaram starts. The other season is the virippu season (autumn or varsha crop) within which 40% of the paddy lands square measure cultivated. (Jacob, 2018)

The study area Chempumpuram is a part of Kuttanad region. Chempumpuram is hamlet in Nedumudy village of Alappuzha district, Kerala. Alappuzha is popularly known as the Venice of East. Alappuzha is one of the most beautiful places in Kerala. It is called the "gateway of backwaters" and, is a hub of Kerala tourism. In Chempumpuram currently there are 6 padashekarms (in ward 14 & 15) and it belongs of 910 farmers. Each padashekaram has a Secretary and President to control the padashekara samiti. There are lease farmers and own land farmers in Chempumpuram. 75% of farmers have their own land for paddy production.

3.4 NEED FOR THE REVIVAL OF PADDY FARM SECTOR IN KERALA

In 1971, the calculable per capita daily handiness of domestic rice within the state was 173.64 grams. It declined to 144.24 grams in 2002 and by the year 2012 it sharply decreased to 97.15 grams. As suggested by the State Nutrition Bureau the desired daily diet of associate adult in Kerala ought to contain 460 grams of cereals. As per this norm the total cereal requirement of the state in that year amounts to 44.83 lakh tones. It is ample solely to fulfill 17.2 % of our expected needs. Earlier the state advisory board had projected the cereal needs of the state for the year 2018 as 54.81 tones.

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Due to the geographical and climatical constraints, cultivation of different cereals like wheat or barley isn't viable in Kerala. Again, in recent years the number of rice and wheat distributed through the Public Distribution System (PDS) of the state had declined drastically.

Paddy crop not solely provides food for the human population. However it is additionally a significant supply of fodder to the ever-growing bovine population within the state. Only a minor portion of the whole geographic region in Kerala is unbroken as permanent pastures. In the year 2015- 16 the extent of space unbroken as permanent pastures and grassland within the state was simply 482 hectares that amounted to solely 0.18 %.

The per capita cereal intake in a country includes a tendency to improve with a rise in per capita financial gain. As increase in their income induces individuals to spend comparatively a lot of on non-cereal foods like meat, milk and egg. However, it implies that whereas the demand for cereals as food decreases, its indirect demand will increase. Whereas increasing milk and meat demand, extends successively a requirement for cereals.

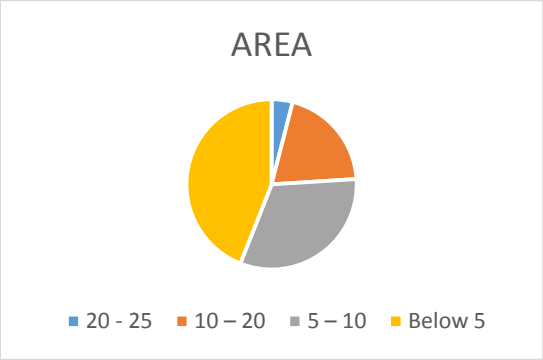
CHAPTER – IV
DATA ANALYSIS AND INTERPRETATION – CHEMPUMPURAM PADDY FARMERS
4.1 DATA ANALYSIS

A sample of 50 farmers were collected using questionnaire method as well as personal interview method. After the data collection is over, the next step is data processing. The processing involves editing, classification and analysis of the Primary Data collected. The Primary Data has been coded and analyzed with the help of charts and graphs. For this, software like excel is used. After the graphical representation, the interpretation of the data is given.

Table 4.1: Area of cultivation by farmer

AREA (in acres)	NO. OF RESPONDENTS	PERCENTAGE
20-25	2	4%
10-20	10	20%
5-10	16	32%
Below 5	22	44%

Figure 4.1: Area of cultivation by farmer



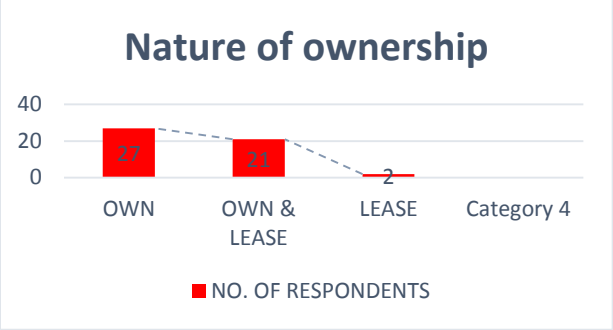
Interpretation
The table shows that there are only 2 farmers who are cultivating paddy between 20 and 25 acres and there are only 10 farmers who having cultivating paddy between 10 to20 acres of land. 16 farmers are doing paddy farming in 5 to 10 acres. There are 22 farmers who having cultivating paddy below 5 acres.

Table 4.2: Nature of ownership

Own/ Lease	No. of Respondents	Percentage
Own	27	54%
Own &lease	21	42%
Lease	2	4%

Source: primary data

Figure 4.2: Nature of ownership



Interpretation:
From the above table it is clear that 54% of the respondents in the study, cultivate paddy in their own land while 42% of the respondents cultivate paddy in their own as well as leased lands and only 4% of the respondents cultivate paddy in leased land.

Table 4.3: Age

AGE	NO. OF RESPONDENTS	PERCENTAGE
35 – 50	5	10%
50 – 65	26	52%
65 – 80	17	34%
80 – 95	2	4%

Source: primary data

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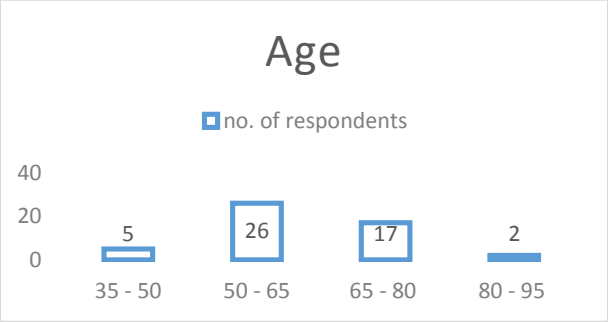
Figure 4.3: Age



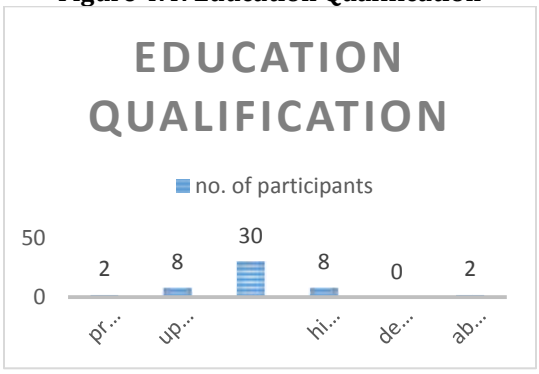
Interpretation:
From the data it is clear that only 10% of respondents belong to the age group of 35 – 50, about 52% of the paddy farmers belong to the age group of 50 – 65. Respondents belong to the age group of 65 – 80 were about 34% and only 4% of the respondents belong to the age group of 80 – 95.

Table 4.4: Education Qualification

EDUCATION	NO. OF PARTICIPANTS	PERCENTAGE
Primary	2	4%
Upper primary	8	16%
High school	30	60%
High secondary	8	16%
Degree	0	0%
Above degree	2	4%

Source: primary data

Figure 4.4: Education Qualification



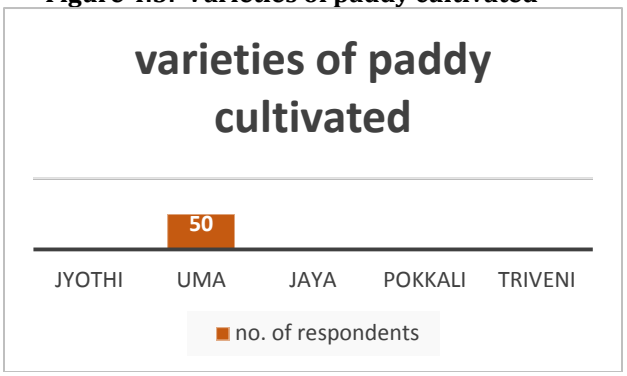
Interpretation:
According to the data, out of 50 participants, 4% had attained primary education while 16% had attained education till upper primary whereas 60% of the paddy farmers had attained education till high school. Respondents who went up to high secondary were 16% whereas only 4% of the paddy farmers had education qualification above degree.

Table 4.5: Varieties of paddy cultivated

Varieties	No. of respondents	Percentage
Jyothi	0	0%
Uma	50	100%
Jaya	0	0%
Pokkali	0	0%
Triveni	0	0%

Source: primary data

Figure 4.5: Varieties of paddy cultivated



Interpretation:
From the above table it is clear that variety of paddy cultivated by all the respondents is Uma, which is also known as D1.

Table 4.6: Whether fertilizers used

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Yes	50	100%
No	0	0%

Source: primary data

Figure 4.6: Whether fertilizers used

Interpretation:
From the above table it is clear that all the farmers use fertilizers and pesticides in their farm. As it has become necessary for cultivation.

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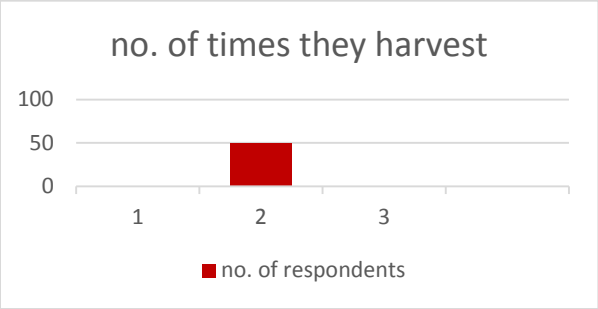
Table 4.7: Number of harvest

No. Of Times Harvest	No. Of Respondents	Percentage
1	0	0%
2	50	100%
3	0	0%

Source: primary data

Figure 4.7: Annual Number of harvest



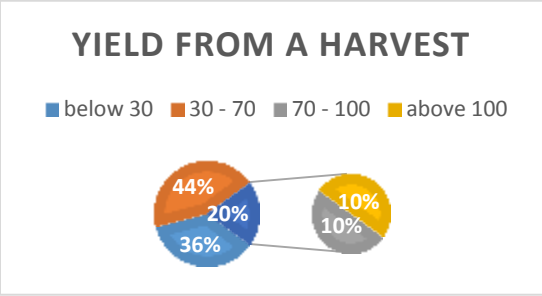
Interpretation:
From the above table we can understand that all the farmers harvest 2 times in a year.

Table 4.8: Yield from a harvest

YEILD	NO. OF PARTICIPANTS	PERCENTAGE
Below 30	18	36%
30 – 70	22	44%
70 – 100	5	10%
Above 100	5	10%

Source: primary data

Figure 4.8: Yield from a harvest



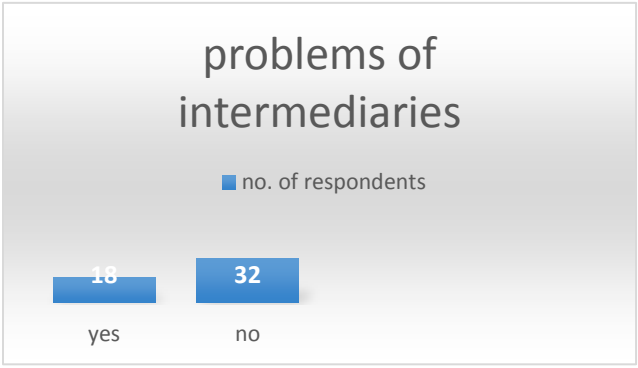
Interpretation:
36% of the paddy farmers received yield below 30 quintals. About 44% of farmers received yield between 30 – 70 quintals. 70 – 100 quintals of yield were received by only 10% of respondents. Similarly, only 10% of paddy farmers received yield above 100 quintals.

Table 4.9: Any problems of intermediaries

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Yes	18	36%
No	32	64%

Source: primary data

Figure 4.9: Any problems of Intermediaries



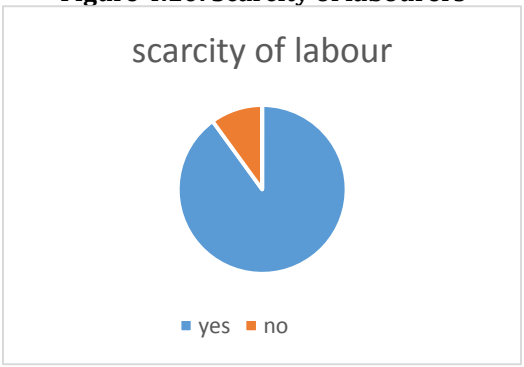
Interpretation:
From the above data it is clear that 36% of the respondents' face problems from intermediaries while 64% of the respondents have no issues with intermediaries.

Table 4.10: Scarcity of labourers

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Yes	45	90%
No	5	10%

Source: primary data

Figure 4.10: Scarcity of labourers



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Interpretation:
90% of the respondents face the problem of scarcity of labourers whereas only 10% of farmers do not face the problem of scarcity of labourers as they have only small plot of land under cultivation therefore an additional unit of labor is not required.

Table 4.11: Uncertainty in price

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Yes	47	94%
No	3	6%

Source: primary data

Figure 4.11: Uncertainty in price

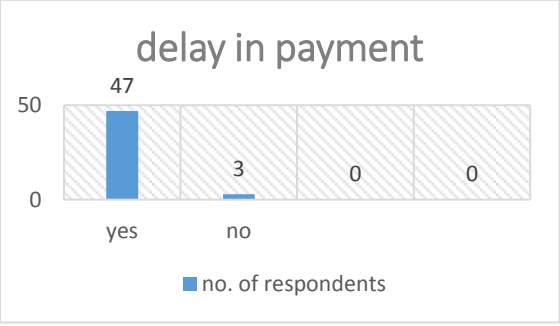
Interpretation:
About 94% of the paddy cultivating farmers is of the view that there is uncertainty in price for paddy while 6% of the paddy cultivating farmers is of the view that there is no uncertainty in price of paddy.

Table 4.12: Delay in payment

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE
Yes	47	94%
No	3	6%

Source: primary data

Figure 4.12: Delay in payments



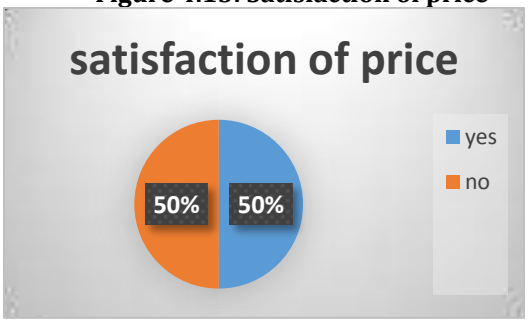
Interpretation:
It is clear from the above table that 94% of the respondents face the challenge of delay in payments at the same time 6% of farmers do not face any challenges regarding payments.

Table 4.13: Satisfaction of price

RESPONSE	NO. OF PARTICIPANTS	PERCENTAGE
Yes	25	50%
No	25	50%

Source: primary data

Figure 4.13: Satisfaction of price



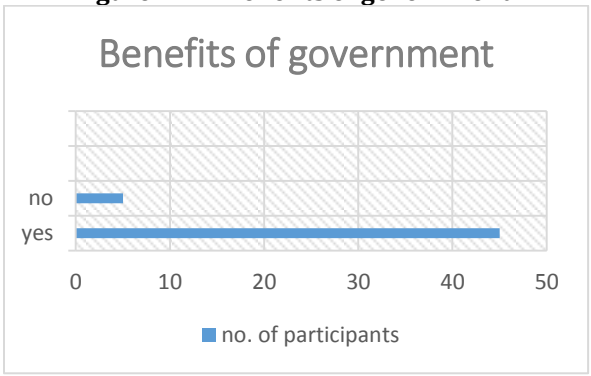
Interpretation:
From the table it is clear that 50% i.e.; half of the respondents are satisfied with the current price of paddy. Similarly remaining 50% are not satisfied with current price of paddy.

Table 4.14: Benefits of government

RESPONSE	NO. OF PARTICIPANTS	PERCENTAGE
Yes	45	90%
No	5	10%

Source: primary data

Figure 4.14: Benefits of government



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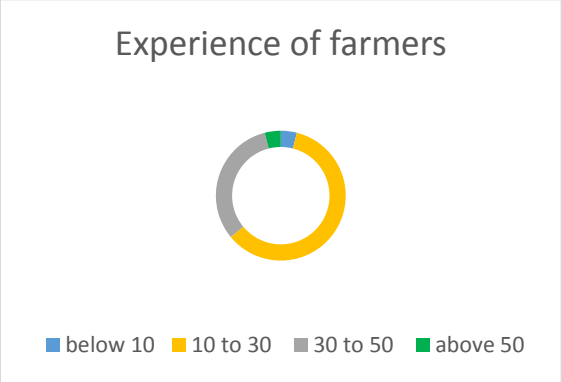
Interpretation:
Above data shows that, about 90% of the farmers got the benefits of government through subsidies and other programmes while 10% of the respondents do not get sufficient benefits from the government.

Table 4.15: Experience of farmers

EXPERIENCE (Years)	NO. OF RESPONDENTS	PERCENTAGE
Below 10	2	4%
10 – 30	30	60%
30 – 50	16	32%
Above 50	2	4%

Source: primary data

Figure 4.15: Experience of farmers



Interpretation:
Evidence shows that only 4% of respondents had experience below 10 years while 60% of the paddy farmers had experience between 10 – 30 years. 32% of the respondents had experience between 30 - 50 years while only 4% of the paddy farmers had experience above 50 years.

CHAPTER-V
SUGGESTIONS, FINDINGS AND CONCLUSIONS

Paddy cultivation in Chempumpuram hamlet have evolved tremendously. The overall development of the region is closely connected with the development of its paddy farm sector. It is observed from the characteristics of the sample farmers cultivating paddy that more than 50% of farmers belonged to the age group of 50 to 65 years. About 60% of the farmers had their education up to high school. It was found that proportion of farmers with farming experience of more than 20 years was 60%.

Therefore it can be concluded that participation of middle-aged farmers with better literacy and long term association of farming activities resulted in better yield and good returns. It was observed that most of the farmers used inputs such as fertilizers and pesticides. The crop variety cultivated was Uma and was harvested two times in a year. Regarding cost and return structure, the analysis revealed that large farmers owning many acres of land received higher returns than the small farmers owning less than an acre. Only 48% of the farmers had transportation problems and the rest did not face any problem. Almost all the farmers faced scarcity of labourers. Most of the labourers are engaged in the Mahatma Gandhi National Rural Employment Guarantee (MGNREGA) program. Others demand high wages which the farmers can't afford to give. Another major reason for this scarcity is that the young generation are not willing to work in farms and are in search of white-collar jobs. Only few farmers mentioned the problem of intermediaries as supplyco (Government Agency) is directly collecting the produce. 97% of the farmers stated the problem of delay in payments. The rest of the farmers did not face this problem as they have opened their accounts in cooperative banks and others who faced the problem have accounts in private banks. The delay was for almost 3 to 6 months and this is very crucial for the farmers as they need cash for the next crop activities. Most of the farmers are satisfied with the price of paddy because if the price is high, labourers demand higher wages. Additionally, there will be an increase in the price of fertilizers, pesticides and other agricultural equipment's. The farmers get the benefits of government policies and program in the form of subsidies, flood relief fund etc. All the farmers faced problems during flood and incurred losses. Even though the farmers get benefits from the government, they are not satisfied with it and are expecting more from the government.

Some suggestions for the betterment of cultivation are:

- More scientific planning and management in paddy cultivation.
- Measures to control flood and salinity ingress.
- Government has to take appropriate measures to give remuneration to farmers at the earliest.
- There should be only one harvest done per year as it ensures greater productivity.
- The work of agricultural labourers should be included as part of MGNREGA programme.

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QUESTIONNAIRE

1. *How much area of land are you cultivating paddy?*
2. *Is the land own/ lease?*
3. *What is your age?*
4. *What is your educational qualification?*
5. *What all varieties of paddy have you been cultivating?*
6. *Have you use any fertilizers?*
7. *How many harvests are there in a year?*
8. *What is the yield from the harvest in the last season?*
9. *Is there any problem of intermediaries?*
10. *Is there any scarcity for labourers?*
11. *Is there any delay for the payments from supplyco?*
12. *Are you satisfied with the price?*
13. *Is there any benefits from government?*
14. *How many years have you being cultivating paddy?*
15. *Is there any uncertainties in price of paddy?*