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**An Integrated Development of Paddy
Cultivation: A study in Malampuzha Grama
Panchayath of Palakkad in Kerala**

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Abstract

Food security has returned to the top of the transatlantic policy making agenda as a result of the 2008 food crisis, which saw skyrocketing food prices and riots in countries around the world. Incidentally, the problem of food security is transmitted to the state of Kerala also. Majority of people mainly depends on the public distribution system to meet their food requirements in the district. The main objective of the study was to find out the present condition of the paddy cultivation in the Malampuzha grama panchayath of Palakkad district. The present study goes through the year-wise production of paddy, cost of cultivation of paddy, trends in area under paddy cultivation and to analyse the general problems associated with paddy cultivation. Findings show that paddy cultivation was like a sinking ship due to various reasons, such as the high wage rate, high cost of cultivation, high price of fertilizer, high price of pesticides, labour scarcity and inadequate irrigation facilities.

Disclaimer

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

Introduction

Paddy cultivation has been an integral part of the indigenous culture of Kerala. Rice is the most important staple food of Keralite's. Palakkad district is having largest scale of paddy cultivation in the state. Of the total production of paddy in the state, 1/3 is from Palakkad District. In the earlier days paddy was cultivated in three seasons- Mundakan, Virippu, and Puncha.

Problem under investigation

The proud culture of Palakkad as the substantial producer of paddy is slowly losing ground. The district is now constrained to depend upon neighboring state for its daily survival. Despite the implementation of food security programme, the district is at its receiving end. At this juncture, the present study attempts to analyse the trends in paddy cultivation, cost of cultivation and problems regarding paddy cultivation.

Objectives of the study

1. To analyse the year -wise production of paddy.
2. To analyse the cost of cultivation of paddy.
3. To analyse the trend in area under cultivation.
4. To analyse general problems associated with production of paddy.

Data source and methodology

The present study made use of both primary and secondary data. Secondary sources mainly included Agricultural Statistics-2010-11, the publication of the department of Economics and Statistics, Economic Review of State Planning Board-2011-12, and Kerala Calling. Information has been collected directly from 50 members of 'Padashekara Samithies' in the village I & II of Malampuzha grama panchayat.

Scope of the study

It is an established fact that although studies on paddy cultivation at national and international level are plenty, very few studies have attempted to dig out the trends in paddy cultivation and pressing problems concerning paddy cultivation in Palakkad district of Kerala state. The present study is a humble attempt in this regard.

SWOT analysis of the study on paddy cultivation

Strength

1. Since rice is the basic food of the people, the production of paddy is inevitable under agriculture sector.
2. Major portion of wetland is used for the cultivation of paddy.
3. High Yielding Variety of Seeds increases the production of paddy.

Weakness

1. Increasing cost of cultivation.
2. Increasing cost of fertiliser.
3. Scarcity of labour force.
4. Shrinkage of water resource.
5. Lack of proper marketing facilities.

Opportunities

1. Advance equipment for the cultivation viz., tiller, tractor, combined harvester, etc. (i.e. Mechanisation)
2. Promotion of green manure leads to increase in production.
3. New variety of pesticides leads to increase in production.

Threats

1. Change of climate adversely affect production of paddy
2. Scarcity of water supply reduces the production.
3. Attack/ interference of the wild animals e.g. Pig, Elephant etc.
4. Real-estate lobbies made obstacles in the agriculture sector.
5. Lack of interest of the educated youth in agriculture.

Limitations of the study

The study is not without some limitations.

1. The present study deals exclusively with paddy, excluding trends in coconut production, coffee, pepper, and vegetables which also offer plenty of scope for research.
2. Short period of the study also affected the result to some extent.

Details of project

Name of grama panchayath :	Malampuzha Grama Panchayath.
Block :	Malampuzha
District :	Palakkad
Year :	2011-12
Name of Project :	Integrated Development of paddy cultivation

Source of fund

1. 13 th financial commission award	- ₹ 6,00,000
2. Beneficiary contribution	- ₹ 6,00,004
Total	- ₹ 12, 00,004

Table - 1
Malampuzha Grama Panchayath

District	Palakkad
Taluk	Palakkad
Block	Malampuzha
Area	183.42 km ²
Village	Malampuzha I & Malampuzha II
Population	14429
Male	7248
Female	7181
Population density	70
Sex ratio	965
Literacy	82.07 per cent
Male	88.25 per cent
Female	75.69 per cent
SC	1970
ST	818
Boundaries	
North	Western Ghats Hills
South	Korayar puzha
East	Pudussery Grama Panchayat
West	Akathethara Grama Panchayat
No. of wards	13

Source: Census report 2001

Analysis of data

Paddy is the principal crop extensively cultivated in all districts of the state. The production of rice decreased from 5, 98,337 tonnes to 5, 22,739 tonnes over the previous year 2009-10. The production of rice in autumn, winter seasons was highest in Palakkad district. The season wise area, production and productivity of paddy are given in Table-2.

Table – 2
Season wise Area, Production and Productivity of Paddy

Season	Area under paddy			Rice production			Productivity	
	2010-11	2009-10	% variation	2010-11	2009-10	% variation	2010-11	2009-10
Autumn	70498	77249	-8.74	170262	192049	-11.35	2415	2486
Winter	91556	107485	-14.82	215011	272284	-21.03	2348	2533
Summer	51133	49279	3.76	137465	134004	2.58	2688	2719
All season	213187	234013	-8.90	522738	598337	-12.63	2452	2557

Source: Agricultural Statistics 2010-11.

The production of rice in autumn season 170262 tonnes which is 32.57 per cent of total production, in winter season 215011

tonnes produced which is 41.13 per cent of total production and in summer 137465 tonnes produced which is 26.30 per cent of total production. The trend in area under production of paddy cultivation is revealed in Table- 3.

Table - 3
Trends in Area, Production and Productivity of Rice in Kerala

Sl. No	Year	Area(Ha)	Production (MT)	Productivity (Kg/Ha)
1	2009-10	234013	598337	2557
2	2010-11	213185	522739	2452

Source: Economic Review 2011

There has been a decline in area, production and productivity of the paddy production.

In Malampuzha grama panchayath, there were 8 Padasekara Samithies which constitute wet area of 220 Ha. In these 8 Padasekara Samithies there were approximately 160 farmers benefited by the implementation of the scheme, Integrated Development of Paddy cultivation during the year 2011-12.

Before the project implementation, large number of small and marginal farmers gave up their paddy cultivation. They were not able to bear the burden of cost to engage in the paddy cultivation. Besides, adverse climatic conditions, there was also lack of sufficient number of labour supply and increasing price of fertilizers etc. At the same time, traditional paddy cultivators are cultivating only during the two seasons autumn and winter. Farmers have not engaged in paddy cultivation in summer seasons.

In Malampuzha grama panchayath, 50 samples were selected from the population for the study purpose. In the above mentioned 50 samples only 2 farmers/cultivators belongs to the land holding size of 0-100 cent, 5 farmers/cultivators includes in the land holding size of 100-200 cent, 11 farmers/cultivators including in the land holding size of 200-300 cents, 14 farmers/ cultivators were included in land holding size of 300- 400 cents and 18 farmers/cultivators included in land holding size of 400-500 and 1 in land holding size of 500-600 cent.

The table shows the details of production and productivity of paddy during the project implemented year and its previous year.

During the year 2010-11, total production of paddy in autumn season was 462721 Kg and in winter season 475427 Kg. The project implemented year (2011-12) the production in autumn season was 450746 Kg and winter season 468264 Kg. A slight decrease occurs due to the shrinkage in the area of cultivation.

Table - 4
Production of Paddy in Malampuzha Grama Panchayath

Sl. No	Size of land holding (in cent)	No. of cultivators	Production of paddy/Ha (kg) 2011-12			Production of paddy/Ha(kg) 2010-11		
			Autumn	Winter	Summer	Autumn	Winter	Summer
1	0-100	2	17580	18772	-	18525	19019	-
2	100-200	5	42955	46595	-	45695	46930	-
3	200-300	11	104377	106855	-	104605	107322	-
4	300-400	14	127685	130958	-	126217	131404	-
5	400-500	17	152899	158984	-	162279	164502	-

6	500-600	1	5250	6100		5400	6250	
		50	450746	468264	-	462721	475427	-

Source: Sample survey

Production of Paddy

Figure - 1

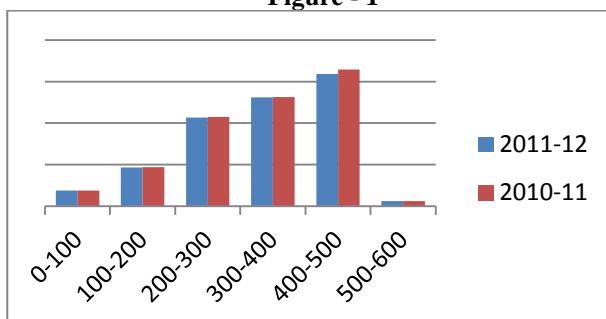
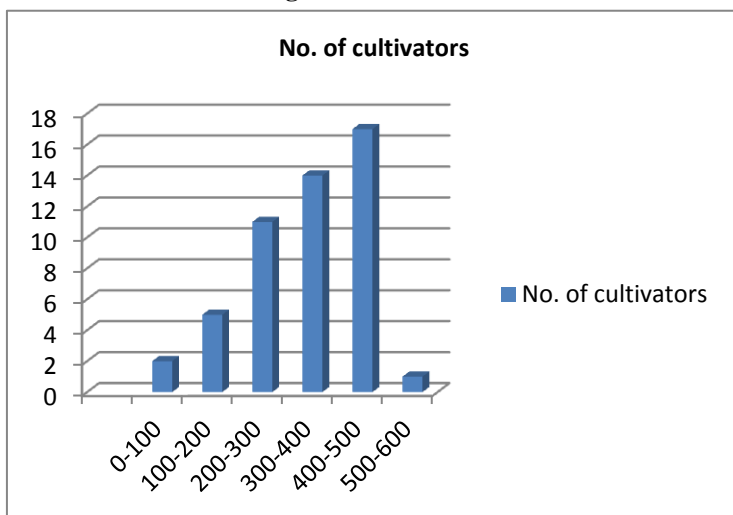


Figure-2



The cost of cultivation of paddy production shows an increasing trend. This reduced the profit of farmers. Table –5 shows the variation of changes.

Table –5
Cost of Cultivation of Paddy in Malampuzha Grama Panchayath

Sl. No	Size of land holding	No. of cultivators	Cost of cultivation/ Hecter in 2011-12	Cost of cultivation/ Hecter in 2010-11
1	0-100	2	48500	36200
2	100-200	5	49000	36575
3	200-300	11	47800	36500
4	300-400	14	48900	36000
5	400-500	17	48550	36250
6	500-600	1	48250	36000
7		50	48550	36254

Source: Sample survey

Cost of Cultivation

Figure - 3

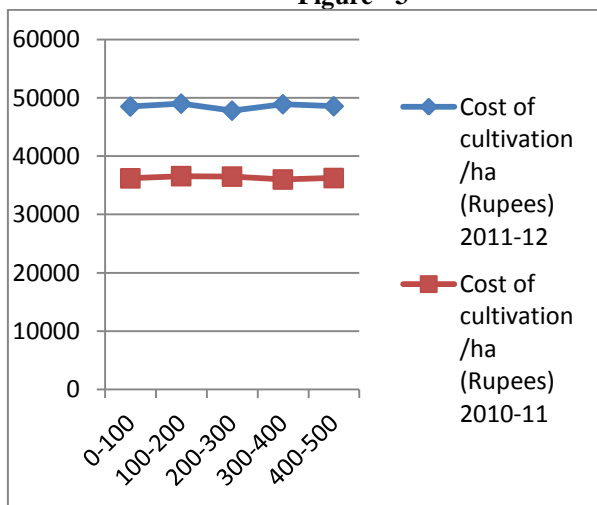


Table- 6
Trends in, Production of Paddy in Malampuzha Grama Panchayat

Sl. No	Year	Area(Ha)	Production (Kg)
1	2010-11	20	84000
2	2011-12	16	67000

Source: Sample survey

There has been a decline in production of paddy in Malampuzha grama panchayat.

Summary & Conclusion

Major Findings

1. There has been a substantial decline in the area and production of paddy in Kerala, in general and Palakkad in particular.
2. However, there has been a substantial increase in the cost of paddy cultivation. Hired human labour accounts for more than 45 per cent to 50 per cent of total cost. This brings about low profitability in paddy cultivation.
3. Field once used for paddy cultivation is being utilized for other crops and non- agricultural purpose (construction work).
4. Shrinkage and displacement of paddy cultivation for other crops especially banana cultivation spells ecological and environmental disaster. There are unconfirmed reports from the sample area that children playing in the school ground adjacent to land rigorously used for banana cultivation fainted having smelt the pesticides.
5. The unprecedented hike in the price of rice in the open market (₹.28-35 per Kg) can be attributed to the growing disappearance of paddy fields in the state.

6. Accordingly the impact and implication of this ominous trend is that Palakkad, once the 'rice-bowl' is increasingly transformed into 'empty- bowl' of the state.

Implications of the Study

The fact that the area once used for the cultivation of paddy is overwhelmingly being set apart for non agriculture purpose especially for construction is the major issue. This begets two consequences, one being that there could be a conspicuous decline in production of paddy vis-a-vis its requirement. Secondly, the water carrying capacity of the soil will be irrevocably lost as the soil is covered by the material of construction. The first issue to an extent be resolved as the short fall in the production of paddy would be offset by the import from elsewhere as ours is not a closed economy. But the second issue is more gruesome because less water is trickled down the soil which will spell major environmental hazard. A day is not after during which beating the heat would because a bitter pill to swallow.

Suggestions & Solutions

1. To offset high cost in cultivation, a rewarding Maximum Support Price (MSP) should be guaranteed /assured to the farmers.
2. Stringent enforcement of the laws and acts to stop the filling of the paddy fields.
3. Effective execution of the food security programme for the special production areas.
4. Adoption of good quality seedlings, integrated water and pest management will help, to boost the yield from paddy.
5. The farmers should be educated about better marketing techniques. This can be carried out in co- ordination with the department of agriculture.