ECONOMIC ANALYSIS OF PADDY PRODUCTION IN MARH BLOCK OF UNION TERRITORY OF JAMMU & KASHMIR, INDIA

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ABSTRACT

The present micro-level empirical study is related to the Economic Analysis of Paddy Cultivation and its Problems in the Chenab *region of Marh Block, District Jammu. The specific objectives of this study are to know the Socio-Economic Status of Farmers in the study area; to analyze the Farm Size wise and Component wise Cost and Returns of Paddy Cultivation in the study area; to explore the Problems faced by farmers in the Paddy Cultivation in the Study area; and to suggest possible policy measures for strengthening paddy cultivation in the Study area. The required data were collected from 66 sample farmer respondents consisting of 40 Marginal Farmers: 20 Small Farmers and 6 Large Farmers. The data regarding the socio-economic conditions such as age, religion, community, educational qualifications, family type, occupation, and other related economic information viz, size of holding, cost, and return structure have been gathered from the respondents through a well-structured interview schedule. From the analysis, it is found that the farm size-wise cost of cultivation, the average cost of cultivation per acre was Rs. 16495/- for Marginal Farmers, Rs. 18420/-, and Rs 19700/- for Small and Large Farmers. Further, there is a significant difference registered in the cost of cultivation as well as returns from paddy cultivation. It is also calculated that the Net Profit from the paddy cultivation for the marginal farmers is Rs.21905/- and it is Rs.22770/- and Rs. 22980/-for small farmers and large farmers respectively. It is suggested that an integrated approach to farm planning and farm management is needed to strengthen paddy cultivation in general. The agricultural productivity, especially paddy productivity coupled with farm and non-farm diversification must be increased in the study area among the large farmers and the existing technology has to be upgraded and disseminated in this area which in turn could increase the paddy productivity and income of farmers.*

Keywords: Farm Size, Paddy Cultivation, Farm Productivity.

INTRODUCTION

Agriculture in India is one of the most important sectors of its economy. Agriculture accounts for 15 percent of India's GDP. Though, the share of Indian agriculture in the GDP has been steadily declining over the years. Yet it is still the single largest contributor to the GDP and plays a vital role in the overall socio-economic development of the country. Agriculture is the primary and critical sector of our country giving livelihood and employment opportunities for the vast majority of the Indian population. India is still home to a large number of poor and malnourished people in the world; higher priority to agriculture

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will achieve the goals of reducing poverty and malnutrition as well as of inclusive growth. Accelerating the growth of agricultural production is, therefore, necessary not only to achieve an overall GDP target of 8 percent during the Twelfth Five Year Plan and meet the rising demand for food, provides food for more than 1 billion people, and yield raw materials for agro-based industries. As per the Central Statistics Office's estimates, in 2016 the Gross Domestic Product, agriculture, and allied sectors grew at 3.6 percent during 2011-12, recording an average rate of growth of 3.6 percent per year during the Eleventh Plan. Further, as per the advance estimates released by CSO in 2016, agriculture and allied sectors are estimated to grow at 1.8 percent during 2015-16 as against 3.6 percent during the last year.

There is a considerable increase in the productivity of rice in India in the recent past. The productivity of rice was 668 kg/ha in 1950-51 and it has increased to 2,066 kg/ha during 2001-02. The increase in productivity of rice is about 209 percent and this increase is due to the introduction of high-yielding rice varieties responsive to high doses of fertilizers coupled with an improved package of practices evolved by Agricultural Scientists for various regions. In fact, there is a considerable increase in the productivity of rice in the country but there are still certain areas, where rice productivity is low and very low. Rice productivity in such areas fluctuates significantly from region to region due to various factors such as soil type, soil fertility, rainfall pattern, flood, water logging and climatic conditions. India is one of the world's largest producers of white rice, accounting for 20 percent of all world rice production. In India, Rice Production has increased from 53.6 million tons in 2000 to 74.6 million tons in 1990, 39 percent increase over the decade. By 2012, rice production had reached 111 million tons, second in the world next to China (182 million tons). India's rice production declined to 89.13 million tonnes in 2009-10 crop years (July–June) from record 99.18 million tonnes in the previous year due to severe drought that affected almost half of the country. India could achieve a record rice production of 100 million tonnes in 2010-11 crop years on the back of a better monsoon this year. India's rice production reached to a record high of 104.32 million tonnes in the 2011-2012 crop years.

Objectives

The core objective of the present research is to empirically analyze the aspects of Farm Size and Productivity of paddy cultivation in Marh Block of District Jammu. The specific objectives are to know the Socio-Economic Status of Farmers in the study area; to analyses the Farm Size wise and Component wise and Season wise Cost and Returns of Paddy Cultivation in the study area; to explore the Problems faced by farmers in the Paddy Cultivation in the Study area; and to suggest possible policy measures for strengthening paddy cultivation in the Study area.

Hypotheses

Based on the objectives, the hypotheses that there is a significant difference registered among the farm size in relation to cost, production, and yield; and it is also assumed that the farm size and yield is directly related have been formulated.

Materials and Methods

The present study has been based on the Primary data only. The survey Method has been adopted for the primary data collection and the data have been gathered through a well-structured and pre-tested interview schedule.

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Analysis and Discussion of the Social Profile of the Sample Farmers

With regard to the gender status, out of 66 respondents, 58 respondents are male, and 08 respondents are female. Thus, it is found that the majority are, more than 88 percent of respondents are male categories; With regard to the age distribution 04 respondents are less than 25 years old Agarwal (1988); Bazaz, & Haq (2013); Agarwal, & Hariom (1990). The majority 32 respondents fall under the age group 25-45 years, 24 respondents belong to the age group 45-65 years and rest of the 06 respondents are above 65 years old. The Religion Status of Sample Respondents witnessed that 88 Percent are Hindu followed by 03 Percent is Christian and 10 Percent belong to the Muslim community; 28 respondents (43 Percent) are BC community, 26 respondents (39 Percent) are MBC community, and 12 respondents (18 Percent) are SC community. It is also noticed that 55 respondents belong to the nuclear family which accounts to 83 percent and even now 11 respondents belong to the joint family and they contribute about 17 percent and with regard to the family size distribution in the 24 percent households the family size is less than 4, 64 per cent households have the family members in between 5 and 8 and rest of the 08 households the family size exceeds 8 among the sample respondents of the study area Desai (1963); Bhowmik & Sharit (1981). The distribution of educational status of the sample respondents infers that among the respondent's majority i.e., 28% are secondary level educated and only 09% are higher level educated. Further, it is noted that 25 percent are primarily educated, followed by 09% are Higher secondary educated, Further it is to be noted that still, 12% of the respondents are illiterate.

The Economic Profile of the Sample Farmers

The income distribution of the sample farmers reveals that only 9 % of the respondents have earned less than Rs.50000/annually followed by 38% belonging to the income group of Rs.50001- 100000; 30 % belong to the income group of Rs.100001 – 150000/- and it is to be appreciated that 23 % belong to the income group of above Rs.150000 Iyengar, (2003); Gupta et al. (1998); George (1982). With regard to the consumption expenditure, 6% the respondents have spent on food items less than Rs.40000/- per annum, 35 % have spent in between Rs.40000 and Rs.80000, 44% of the households spent in between Rs.80000 and Rs.120000/- and 15% of the respondents spent above Rs.120000 per month on food items. Similarly, more than half of the respondents' i.e. 39 % spent less than Rs.10000/- on non-food items and only 13% of the respondents spent above Rs.30000 per month on non-food items. In the case of savings, it is found that 27 % of the respondents have not saved any amount, and half of the respondents. i.e., 44 % have saved less than Rs.10000, and on the other side, only 8 % of the respondents have saved more than Rs.20000/so far in the study area. The debt distribution reveals that 17% have borrowed less than Rs.25000/- and only 12 % have borrowed above Rs.1 Lakh. Among the sample respondents, 39% have owned assets worth less than Rs.2 Lakhs and 9% of the respondents have owned assets worth above Rs. 6 Lakhs Table 1.

Table 1
SOCIAL AND ECONOMIC PROFILE OF THE FARMERS

Sl. No	Social Profile	Respondents		Economic Profile	Respondents	
		Nos	Percent		Nos	Percent
1	**Sex** Total	66	100	**Annual Income**		
	Male	58	88	Below 50000	06	09
	Female	08	12	50001 to 100000	25	38
2	**Religion**			100001 to 150000	20	30

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	Hindu	58	88	Above 150000	15	23
	Christian	06	09	**Asset Position**		
	Muslim	02	03	Below 2 Lakhs	26	39
3	**Community**			2 to 4 Lakhs	22	34
	SC/ST	12	18	4 to 6 Lakhs	12	18
	MBC	26	39	Above 6 Lakhs	06	09
	BC	28	43	**Consumption – Food Items**		
	Total	66	100	Below 40000	04	06
4	**Age**			40001 to 80000	23	35
	Below 25	04	06	80001 to 120000	29	44
	25- 45	32	48	120001 and Above	10	15
	45-65	24	36	**Consumption-Non Food Items**		
	65& Above	06	09	Below 10000	26	39
	Total	66	100	10001 to 20000	16	25
5	**Family Type**			20001 to 30000	15	23
	Nuclear	55	83	30001 &Above	09	13
	Joint Family	11	17	**Indebtedness**		
6	**Family Size**			Below 25000	12	17
	Less than 4	16	24	25001 to 50000	18	28
	5-8	42	64	50001 to 75000	15	23
	More than 08	08	12	75001 to 1 Lakh	13	20
7	**Marital Status**			Above 1 Lakh	08	12
	Married	54	82	**Savings**		
	Un-Married	08	12	No Savings	18	27
	Widow	04	06	Below 5000	13	20
				5001 to 10000	16	24
				10001 to 15000	08	12
				15001 to 20000	06	09
				20001& Above	05	08

Source: Primary Data.

Economics of Paddy Cultivation

Among the different components of costs, farmers spent more on applying farmyard manures which accounts for 13 percent which is followed by weeding 13 percent. Next farmers spent on pesticides 13 and 12 percent on fertilizers. About 10 percent Mani & Jose (1997) were spent on nurse pulling which is followed by 9 percent on main field preparation and 9 percent spent on harvesting. It was followed by plant protection which accounts for about 8 percent and 5 percent was spent on seed cost. With regard to the farm size-wise cost of cultivation, the average cost of cultivation per acre was Rs. 16495/- for Marginal Farmers, Rs. 18420/-, and Rs 19700/- for Small and Large Farmers. It is also found that the average cost of cultivation during Kuruvai season for the marginal farmers is Rs.19155 and it is Rs.19650/- and Rs.21200/-for small farmers and large farmers respectively Nadkarni & Deshpande (1979). The variations in the cost of cultivation is also found among the farm sizes since the SD value for marginal farmers is 245.67 and it is 445.18 and 605.45 for small farmers and large farmers respectively. There is a significant difference registered in the cost of cultivation of Kuruvai season among different farm groups since the calculated F value is

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47.85. During the Samba season in the study area among the sample farmers, the average cost of cultivation for the marginal farmers is Rs.19675 and it is Rs.21650/- and Rs.23600/-for small farmers and large farmers respectively. The variations in the cost of cultivation are also found among the farm sizes since the SD value for marginal farmers is 268.55 and it is 483.10 and 715.45 for small farmers and large farmers respectively. It is clear that there is a significant difference registered in the cost of cultivation among different farm groups since the calculated F value is 56.15 Table 2.

Table 2
FARM SIZE WISE COST OF CULTIVATION OF PADDY

S. No	Farm Size	Mean	SD	Std.Error	'F' Value
1	Marginal Farmers	17155	245.67	27.87	47.85
2	Small Farmers	19650	445.18	46.35	
3	Large Farmers	21200	605.45	58.85	
	Total	19335	523.25	52.45	

Source: Computed from the Primary Data.

With regard to the returns from paddy cultivation, the average returns from paddy cultivation are calculated to be Rs.40757 consisting of the Rs.39423 valued Paddy and Rs.1333 valued straw. Further, the average return from cultivation for the Marginal farmers is Rs. 38400/- and it is Rs.41190/- and Rs.42680 for the Small Farmers and the Large Farmers respectively. The average returns of cultivation of the farmers who are higher educated account for the maximum of Rs 32,395/- which it is followed by illiterate which is Rs.32,060/-. For primary educated it is Rs. 30,826/-. For farmers who have done their Secondary education, it is Rs. 31,867/-. In the case of higher secondary, it is Rs.32, 392/. There is a significant difference registered in the returns from the paddy cultivation. This fact is proved as the mean value of returns from the paddy cultivation for the marginal farmers is Rs.42600/- and it is Rs.44300/- and Rs. 45400/-for small farmers and large farmers respectively. More variations in the returns from cultivation are also found among the farm sizes since the SD value for marginal farmers is 212.35 and it is 386.15 and 435.30 for small farmers and large farmers respectively. It is clear that there is a significant difference registered in the cost of cultivation among different farm groups since the calculated F value is 36.45 Table 3.

Table 3
FARM SIZE-WISE RETURNS FROM CULTIVATION

S. No	Farm Size	Mean	SD	Std. Error	'F' Value
1	Marginal Farmers	42600	212.35	29.15	36.45
2	Small Farmers	44300	386.15	38.80	
3	Large Farmers	45400	435.30	51.55	
	Total	44100	465.15	48.25	

Source: Computed from the Primary Data.

Table 4
FARM SIZE WISE NET PROFIT FROM CULTIVATION OF PADDY

S. No	Farm Size	Mean	SD	Std. Error	C-B Ratio	'F' Value
1	Marginal Farmers	21905	638.15	69.33	2.32	31.05
2	Small Farmers	22770	585.35	61.87	2.24	
3	Large Farmers	22980	485.55	69.45	2.16	

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	Total	22552	465.15	42.28	2.10	

Source: Computed from the Primary Data.

The Net profit earned from paddy cultivation in the study area reveals an inverse relationship between Farm Size and Profitability Sadeesh et al. (2006). Net Profit from the paddy cultivation for the marginal farmers is Rs.21905/- and it is Rs.22770/- and Rs. 22980/- for small farmers and large farmers respectively. It is also found that it is clear that there is a significant difference registered in the cost of cultivation among different farm groups since the calculated F value is 31.05. Further, the Benefit Cost ratio for the Marginal Farmers is calculated to 2.32 and it is 2.24 and 2.16 for the Small Farmers and Large Farmers respectively. i.e. the profitability of Marginal Farmers is comparatively higher than that of Small farmers and which is higher than that of Large Farmers Tables 4 & 5.

Table 5
PROBLEMS FACED IN THE PADDY CULTIVATION

S.No	Particulars	Mean Score	Rank
1	Irrigation Problem	63.18	I
2	Non-Remunerative Price	59.62	II
3	Shortage of Power	56.13	III
4	Poor Quality of Inputs	50.41	IV
5	High Price and Non-Availability of Fertilisers	48.43	V
6	Poor Marketing	45.67	VI
7	Middlemen Exploitation	42.41	VII
8	Lack of Credit Crop Production	41.12	VIII
9	Lack of Financial Availability	40.45	IX
10	Scarcity of Labour during Peak Periods	40.27	X

Source: Computed Primary Data.

It is found that nearly two-thirds of the farmers are facing problems in paddy cultivation. Among the problems, about 63 % of the farmers are suffering from the problems in the lack of availability of irrigation, more than 50 % of the farmers are suffering from the problems of nonremunerative price to paddy, power shortage, and inputs availability, quality, and price; and more than 40 % of the farmers are facing the problems of fertilizers availability and its prices, poor marketing, middlemen exploitation, problems in the credit and financial availability, and labour shortage during the peak season Thiruvenkatachari (1997).

Policy Recommendations and Conclusion

Based on the present micro-level empirical study, it is suggested that an integrated approach to farm planning and farm management is needed to strengthen paddy cultivation in general. The agricultural productivity, especially paddy productivity coupled with farm and non-farm diversification has to be increased in the study area among the large farmers and the existing technology has to be upgraded and disseminated in this area which in turn increases the paddy productivity and income of farmers. It is also suggested that the existing infrastructure facilities like irrigation, roads, market, etc. have to be improved and new

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facilities have to be created and the focus may be on paddy cultivation. It is strongly suggested that a balanced use of organic nutrients, chemical fertilizers, bio-fertilizers, and other agrochemicals will ensure sustainability in the paddy cultivation in the study area. Further cropping patterns may be changed according to the current needs and availability of inputs and other infrastructures.

REFERENCES

Agarwal, N.L., (1988), "Composition of Commercial Crops and Trends of Growth in area, Production and Productivity of Oilseeds in Rajasthan". *Indian Journal of Agricultural Economics.,43*(2): 312-316.

Agarwal, N.L., & Hariom, (1990), "Pattern of Market Arrivals and Prices of Rapeseed-Mustard in Bharatpur District (Rajasthan)." *Indian Journal of Agricultural marketing, 4*(2): 140-146.

Bazaz, N.H., & Haq, I.U. (2013), "Crop Diversification in Jammu and Kashmir: Pace, Pattern and Determinants," *IOSR Journal of Humanities and Social Science* (IOSR-JHSS) Vol II, Issue 5.

Bhowmik K, Sharit. (1981) Class Formation in Plantation System, People's publishing House, New Delhi.

Desai, D.K (1963): "Economics of Cropping Pattern of Gujarat State", *Indian Journal of Agricultural Economics,* Vol.18, No.1, p.106.

George, P.S. (1982) "Agricultural Price Movements in Kerala".: Agricultural Development in Kerala. Ed P.P. Pillai.

Gupta, Shakuntla and Singh, B. (1998), "Price Spread in Marketing of Groundnut and Rapeseed-Mustard in Punjab". *Indian Journal of Agricultural. Marketing, 12*(2): 129-134.

Iyengar, S. (2003): "Environmental Damage to Land Resources Need to Improve Land Use Data Base", Economic and Political Weekly, Vol. 38, No. 34, pp. 3596-3604.

Mani K.P., & Jose P.P (1997): "Shift in Cropping Pattern in Kerala- An Inter- District Analysis", *Indian Journal of Agricultural Economics*, Vol.52, No.3, pp.433.

Nadkarni, M.V., & Deshpande, R.S. (1979). "Under-utilisation of Land-Climatic or Institutional Factors", *Indian Journal of Agricultural Economics*, Vol.34, No.2, April-June, pp.1-16.

Sadeesh, A. et al. (2006), Growth and Instability Analysis of Major Oilseeds in India. Agricultural. *Situation in India, 63*(2): 179-83.

Thiruvenkatachari, P.N. (1991), "Economics of Groundnut Production under Rainfed Condition in Tamil Nadu", *Indian Journal of Agricultural Economics, 46*(2): 265-268.

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