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Short Note

Cost and returns of kharif paddy (For variety- Safri) in Bastar plateau of Chhattisgarh, India

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Abstract
The present study is based on economic analysis of paddy production with the objective to work cost and returns of kharif paddy in the study area. The present study was conducted in Bastar plateau of Chhattisgarh, India. Out of seven blocks in the district, two blocks, namely Jagdalpur and Bastar were selected randomly for the study. Five villages were selected from each of the two blocks and ten respondents were selected from each village. In all, 10 numbers of villages and 100 respondents were selected for the study. The primary data were collected for year 2014-15. The major findings of this study revealed that on Overall, on an average the per hectare cost of cultivation of kharif paddy (Variety- Safri) was calculated as Rs. 33721.16, on an average yield of kharif paddy was observed for (Variety- Safri) 31.61 quintals and average cost of production per quintal of kharif paddy in Variety- Safri (Rs. 1068.25). The input-output ratio was kharif paddy was Variety- Safri (1:1.40).

Keywords: Paddy, economic analysis, input wise cost of cultivation, net rupees per rupee of investment, cost concepts, measures of farm profit

Introduction
Paddy is the most important and extensively grown food crop in the World. It is the staple food of more than 60 per cent of the world population. Paddy is mainly produced and consumed in the Asian region. India has the largest area under paddy in the world and ranks second in the production after China. Country has also emerged as a major rice consumer. Rice is primarily a high energy calorie food. The by-products of paddy are also used for preparing various industrial products especially in textile industries as it contains good amount of starch. The straw of paddy is used for packing. It is a good source of fodder and may be used as litter. Rice bran is a source of edible oil. The bran is also used in manufacturing cardboard. Looking to the importance of the crop, it is required to increase the production of paddy and mere attaining the level of food requirement of population is not sufficient because India is already Importing pulses and oilseeds from other countries, so we will have to produce that quantity of cereals, which can be exported after meeting the requirement of the domestic population? This will compensate with the cost incurred for the import of other crops and provide strength to Indian economy.

Primary data was collected for the year 2014-15. Multi-stage sampling design was adopted for the ultimate selection of paddy growing farmers. The Chhattisgarh is divided into 3 agro-climatic zones and Bastar district was randomly selected from selected Bastar plateau of Chhattisgarh, India. Two blocks Jagdalpur and Bastar were randomly selected from bastar district and a total of 100 farmers were interviewed. The zone was the first stage, district was the second stage, blocks were the third stage and villages were the fourth stage. Households of farm categories were the ultimate stage. To estimate the cost of cultivation of kharif paddy (Variety- Safri) slandered method was adopted which include cost A_1, A_2, B_1, B_2, C_1 and C_2. Total cost of cultivation is calculated separately for the different category of farmers as well as for overall farmers collectively. Both, variable and fixed cost is included for the calculation of cost of cultivation. Simple average method was used to analysis the data, cost concept is used for calculating costs of paddy.

Input wise cost of cultivation of kharif paddy for variety- Safri
The present section deals with the economics of cultivation of kharif paddy (Variety- Safri) grown in the study area. (Table 1) clearly shows input wise cost of cultivation of paddy (Variety- Safri) per hectare, which is highest in case of medium farms and lowest in case of small farms. Cost of cultivation showed increasing trend from marginal to medium farmers. It

is due to the fact that medium farmers could incur more expenditure on modern farm inputs like quality seed, fertilizers, plant protection chemicals, hired labours etc.

The major share of cost among different cost items were found in labour which is 49.42 per cent to the total cost of cultivation out of which 32.68 per cent contribution was of human labour and bullock and machine labour together contribute 16.74 per cent. Total labour cost was increased from marginal to large farms but its contribution in total cost was found maximum in case of small and medium farms which was 49.78 and 49.21, respectively. Total input cost was found 68.98 per cent, whereas total fixed cost was 31.02 per cent to the total cost. Rental value of land is highest among fixed costs, which is 29.65 per cent to the total cost of cultivation.

Table 1: Input wise cost of cultivation of Kharif paddy for variety- Safri at sampled household (Rs./ha)

S. No.	Particulars	Kharif season				
		Marginal	Small	Medium	Large	Overall
A	**Input Cost**					
1	**Human Labour**					
	a) Family	4716.26 (13.97)	3154.46 (9.36)	1793.01 (25.33)	870.16 (2.58)	3559.67 (10.56)
	b) Hired	5745.35 (17.02)	8202.13 (24.34)	9871.07 (29.32)	10820.53 (32.14)	7459.53 (22.12)
	Total human labour	10461.61 (30.98)	11356.59 (33.70)	11664.08 (34.65)	11690.69 (34.73)	11019.21 (32.68)
2	**Bullock and Machinery**					
	a) Bullock Labour	2721.46 (8.06)	1812.08 (5.38)	1013.12 (3.01)	-	2027.87 (6.01)
	b) Machine Power	3516.43 (10.41)	3604.57 (10.70)	3890.75 (11.56)	3926.42 (11.66)	3618.72 (10.73)
	Total Machine and Bullock Labour	6237.89 (18.47)	5416.65 (16.07)	4903.87 (14.57)	3926.42 (11.66)	5646.59 (16.74)
3	**Total labour Cost**	16699.50 (49.46)	16773.24 (49.78)	16567.95 (49.21)	15617.11 (46.39)	16665.81 (49.42)
4	Seed cost	1806.31 (5.35)	1810.26 (5.37)	1921.53 (5.71)	1965.24 (5.84)	1830.30 (5.43)
5	Manure & Fertilizers	3619.48 (10.72)	3711.23 (11.01)	3801.35 (11.29)	4220.83 (12.54)	3703.86 (10.98)
6	Plant protection	436.86 (1.29)	318.21 (0.94)	352.15 (1.05)	574.99 (1.71)	385.44 (1.14)
7	Irrigation charges	418.36 (1.24)	402.54 (1.19)	385.25 (1.14)	650.32 (1.93)	416.99 (1.24)
8	Interest on working capital @4%	243.52 (0.72)	264.81 (0.79)	283.13 (0.84)	295.44 (0.88)	259.23 (0.77)
	Sub total	23224.03 (68.78)	23280.29 (69.09)	23311.36 (69.24)	23323.93 (69.29)	23261.63 (68.98)
B	**Fixed Cost**					
9	Land Revenue	10 (0.03)	10 (0.03)	10 (0.03)	10 (0.03)	10 (0.03)
10	Interest on Fixed Capital	240.37 (0.71)	237.49 (0.70)	236.08 (0.70)	235.38 (0.70)	238.48 (0.71)
11	Depreciation on implements	291.57 (0.86)	168.34 (0.50)	107.69 (0.32)	92.88 (0.28)	211.05 (0.63)
12	Rental value of land	10000 (29.62)	10000 (29.68)	10000 (29.70)	10000 (29.71)	10000 (29.65)
	Sub total	10541.94 (31.22)	10415.83 (30.91)	10353.77 (30.76)	10338.26 (30.41)	10459.53 (31.02)
	Total Cost (A+B)	33765.97 (100.00)	33696.12 (100.00)	33665.13 (100.00)	33662.19 (100.00)	33721.16 (100.00)

Note: Figure in the parenthesis indicate percentage to the total cost of cultivation (A+B)

Cost concept wise income over different cost in kharif paddy (Variety- Safri)

The cost and returns on the basis of cost concept in the production of paddy have been presented in the table 2, which portrays that, on an average cost A_1, cost A_2, cost B_1, cost B_2, cost C_1, cost C_2 and cost C_3 were worked out to Rs. 19923.01, Rs. 19923.01, Rs. 20161.48, Rs. 30161.48, rs. 237021.16 and Rs. 37093.28 per hectare respectively on the sample farms. It was noted that rupees 10000 were considered as imputed rental value of owned land for one crop season. Cost A_1 is showing increasing trend from marginal to large sized farms because of more use of hired labour, plant protection chemicals, manure and fertilizers etc.

Table 2: Cost concepts in kharif paddy for (variety – Safri) among various categories of (Rs./ha)

Particulars	Kharif season				
	Marginal	Small	Medium	Large	Overall
Cost A1	18809.34	20304.17	21636.04	22556.65	19923.01
Cost A2	18809.34	20304.17	21636.04	22556.65	19923.01
Cost B1	19049.71	20541.66	21872.12	22792.03	20161.48
Cost B2	29049.71	30541.66	31872.12	32792.03	30161.48
Cost C1	23765.97	23696.12	23665.13	23662.19	23721.16
Cost C2	33765.97	33696.12	33665.13	33662.19	33721.16
Cost C3 + 10 %	37142.57	37065.73	37031.64	37028.41	37093.28

Measures of farm profit in kharif paddy for Variety- Safri

It is quite evident from table 3 that on an average, the total average cost, value of net income, family labour income and farm business income per hectare came to Rs. 33721.16, Rs. 13371.11, Rs. 16930.78 and Rs 27169.26 respectively from paddy crop. Gross income of the farms by main product and by product together was found to be Rs 47092.26 per hectare, which was found increasing from marginal to large farms. Whereas, net income was found maximum on large farms (18299.51 Rs./ha.) and minimum on medium farms (11800.53 Rs./ha.). Family labour income was found showing decreasing trend from marginal to large farms as contribution of family labour was more on marginal farms and decreased gradually with the increase in farm size.

Net returns per rupee of the investment of kharif paddy for Variety- Safri

Net returns per rupee of the investment for each category have been presented in table 4. Input output ratio was found maximum in case of marginal farms being 1: 1.54 and shows

a decreasing trend from large to marginal sized farms. It is due the fact that increased productivity on small to large farms was the result of extra cost incurred, which decreased the input output ratio. Secondly, family labours do work more efficiently on the farms and marinal farmers were using more family labours as compared to hired labours whereas contribution of family labour found decreasing with the increase in farm size. Overall input-output ratio was found 1: 1.40 in the cultivation of paddy crop.

Table 3: Cost and return of kharif paddy on the sample farms for different group of farms Variety – Safri (Rs./ha)

S. No.	Particulars	Kharif Season				
		Marginal	Small	Medium	Large	Overall
1	Total Cost	33765.97	33696.12	33665.13	33662.19	33721.16
2	Gross Income	45566.5	47684.6	48888.5	51961.7	47092.26
3	Net Income	11800.53	13988.48	15223.37	18299.51	13371.11
4	Family laboure income	16516.79	17142.94	17016.38	19169.67	16930.78
5	Farm Business Income	26757.16	27380.43	27252.46	29405.05	27169.26

Table 4: net returns per rupee of investment by size of farms in kharif paddy for Variety- Safri (Rs./ha)

Category	Input (Rs.)	Output (Rs.)	Input-Output Ratio
Marginal	33765.97	45566.5	1: 1.35
Small	33696.12	47684.6	1: 1.42
Medium	33665.13	48888.5	1: 1.45
Large	33662.19	51961.7	1: 1.54
Overall	33721.16	47092.26	1: 1.40

References

1. Mohandas K, Thomas EK. Economic analysis of rice production in Kuttanad areas of Kerala. Agricultural Situation in India. 1997; 54(9):555-560.
2. Nirmala, Muthuraman. Economic and Constraint Analysis of Rice Cultivation Kaithal District of Haryana. Indian Research J of Extension Education, 2009, 9(1).
3. Suneetha K, Narendra I Kumar. Cost and Returns Structure of Paddy in Andhra Pradesh. Indian Journal of Research. 2013; 3:5.
4. Netam Kumar Om, Sahu, Kumar Leelesh. A Consumption Pattern of Agrochemicals, Cost and returns of kharif Paddy for Variety MTU-1010 in Bastar Plateau of Chhattisgarh. An International Journals of Plant Plant Research. 2017; 17(1):161-166.