



BENEFIT-COST ANALYSIS OF PADDY PRODUCTION IN AURAIYA DISTRICT WESTERN U.P.

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ABSTRACT

The study was conducted in district Auraiya during 2014-15 to benefit cost analysis of per hac paddy production. Primary data was collected through structured questionnaire. Ten villages from three tehsil namely Auraiya, Bidhuna and Ajitmal were randomly selected. A sample size of 100 farmers was used and the respondents were randomly selected. Overall cropping intensity was ranged 277.03-298.85 among farm categories. Per hectare cost of paddy cultivation was observed Rs. 44429.94 whereas; gross income and net income were recorded Rs. 63990.82 and 12126.98, respectively. Benefit-Cost ratio of paddy was estimated i.e. 1:1.30.

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INTRODUCTION

India is one of the world's largest producers of paddy, accounting for 20% of all world paddy production. Indian ranks first in area but second in production after china. It occupies an area of 42.75 million hectares, production 104.24 million tonnes with productivity 2.46tonne/ha. Uttar Pradesh constitutes paddy with an area of 5.86 million hectare, 14.41million tonnes, and productivity of 24.60 qt/ha. It also covered area under paddy 52566 thousand ha, production 164.32 thousand mt and productivity 31.26 q/ha during 2013-14. The present study was undertaken with following objective i.e. to analyse cropping intensity, cost of cultivation, and measures of farm profits. In the context of farm production, paddy still placed prime place among farm producers, consumer, processors, industrialists and exporters as compared to other foodgrains.

METHODOLOGY

The study was carried out in the Auraiya district during 2014-15. Three tehsils of district Auraiya (Auraiya, Bidhuna and Ajitmal) were selected for the relevant information. Five villages from one tehsil of two blocks were randomly selected and a sample of size one hundred farmers was used.

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The farmers were also selected randomly. Primary data was personally collected from the respondents through structured questionnaire.

Benefit Cost Ratio (BCR): The benefit cost ratio (BCR) was worked out by using following formula (Kuthe, 2012):

$$B: C \text{ ratio} = \frac{\text{Discounted cash inflows}}{\text{Discounted cash outflows}}$$

RESULTS AND DISCUSSION

Cropping pattern and cropping intensity

Table-1 exhibits that average net cultivated area on marginal, small and medium farms were 0.61 hectare, 1.27 hectare and 2.88 hectares. Overall average of net cultivated area and gross cropped area were 0.99 and 2.88 hectares. Cropping intensity came to be 281.83 per cent on small farms which range from 277.03 per cent on medium farms to 298.95 per cent on marginal farms. The study visualized that marginal farmer adopted remunerative crops like vegetable crops in turns resulted rather than cereals highest cropping intensity.

Costs of cultivation of paddy

Table-2 indicates that per hectare average cost of cultivation of paddy came to Rs. 44429.94 Per hectare cost of cultivation

Table 1. Cropping intensity on different size of farms

S. No.	Size of farms	No. of farms	Net cultivated area (ha)	Gross Cropped area (ha)	Cropping intensity
1	Marginal	71	0.61	1.83	298.85
2	Small	17	1.27	3.58	281.83
3	Medium	12	2.88	7.98	277.03
Average		100	0.99	2.884	289.55

Note- Figures in parentheses show the percentage to corresponding total

Table 2. Cost of cultivation of paddy (Rs./ha.)

S. N.	Particulars	Size group of farms			
		Marginal	Small	Medium	Average
1.	Human Labour	8426.82 (17.81)	5004.63 (11.76)	4550.99 (11.07)	6441.45 (14.49)
2.	Machinery charges	2110.37 (4.45)	2054.65 (4.83)	1888.08 (4.60)	2032.76 (4.57)
3.	Seed	1395.51 (2.95)	2168.35 (5.09)	1723.88 (4.19)	1688.28 (3.79)
4.	Manures and fertilizer	10079.62 (21.29)	7745.63 (18.21)	8259.72 (20.09)	8959.81 (20.16)
5.	Irrigation charges	1428.09 (3.02)	1406.02 (3.33)	1274.40 (3.09)	1378.67 (3.10)
6.	Plant protection	476.34 (1.01)	437.53 (1.03)	431.48 (1.05)	453.56 (1.02)
7.	Total working capital*	23916.75 (50.53)	18816.81 (44.22)	18128.55 (44.09)	20954.55 (47.16)
8.	Interest on *	418.54 (0.88)	329.29 (0.77)	317.25 (0.78)	366.71 (0.83)
9.	Rental value of Land	13000.00 (27.46)	13000.00 (30.55)	13000.00 (31.62)	13000.00 (29.26)
10.	Interest on fixed capital	4935.82 (10.42)	5845.65 (13.75)	5265.15 (12.81)	5348.33 (12.04)
11.	Sub total**	42271.11 (89.28)	37991.75 (89.28)	36710.95 (89.028)	39669.59 (89.28)
12.	Managerial cost(12%to*)	5072.53 (10.71)	4559.01 (10.71)	4405.31 (10.71)	4760.35 (10.71)
	Grand total	47343.46 (100.00)	42550.76 (100.00)	41116.26 (100.00)	44429.94 (100.00)

Note- Figures in parentheses show the percentage to corresponding total

Table 3. Per hectare costs and returns of paddy (Rs./ha.)

S.No.	Particulars	Marginal	Small	Medium	Overall average
1.	Total cost of cultivation	47343.64	42550.76	41116.26	44429.94
2.	Gross income	63990.82	55537.71	48728.07	57548.58
3.	Net income	16647.18	12986.95	7611.81	13118.67
4.(I)	Yield of main product(qt/ha)	39.76	34.48	30.46	35.81
(II)	Yield of By product (qt/ha)	52.83	46.58	39.95	47.59
5.	Cost of production (Rs./qt.)	891.78	947.44	1047.20	940.93
6.	B:C Ratio	1:1.35	1:1.31	1:1.19	1:1.30

was highest (Rs. 47343.46) on marginal farms, mainly due to maximum investment on fixed capital compared to the small and medium farms. The major portion of total costs was incurred on manures and fertilizer (20.16 per cent) followed by human labour i.e., (14.49 per cent), machinery charges (4.57 per cent), irrigation (3.10 per cent), seed (3.79 per cent) and plant protection (1.02 per cent), respectively. The cost incurred on interest on working capital, rental value of owned land, interest on fixed capital and 12% cost marginal cost of sub-total was calculated 0.83, 29.26, 12.04 and 10.71 per cent of total costs, respectively. The maximum share among these costs was rental value of owned land being 29.26 per cent of total cost per hectare. Table-3 estimated per hectare basis on marginal, small, medium and average of paddy related gross income Rs.63990.82, Rs.55537.71, Rs.48728.07 and Rs.57548.58; net income Rs.16647, Rs. 12986.95, Rs.7611.81 and Rs.13118.67; productivity (qt/ha) of main product 39.76, 34.48, 30.46 and 35.81; cost of production (Rs./qt) 891.78, 947.44, 1047.20 and 940.93; and B-C ratio 1:1.35, 1:1.31, 1:1.19 and 1:1.30; respectively. Per hectare gross income was highest on

marginal farms due to higher investment on fertilizers and H.Y.V. seeds resulted higher productively.

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