



An Economic Analysis of Wheat Cultivation Sitapur District of Uttar Pradesh

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ABSTRACT:

Wheat is the world's most widely cultivated staple food crop being grown since pre-historic period and being consumed in various forms by more than one thousand million people in the world. Wheat plays an important role in shaping agriculture and food security mission. The present study was based on the economic analysis of wheat cultivation in Sitapur district of Uttar Pradesh. Sitapur district was purposively selected for the study. Primary data was collected by personal interview of selected farmers with the help of pre-tested schedule. The overall findings of the study revealed that post-harvest and threshing land rental value contributed the most to the total cost of production for each category of farmers. Large category farmers were getting higher returns than medium and small farmers, mainly because large farmers have their own farm machinery. The study clearly shows that post-harvest and threshing land rental value contributes the most to the total cost of production for each category of farmers. The price of the crop does not increase in the proportion in which the cost increases. The large class of farmers used to get higher returns than the medium and small farmers, mainly because the large farmers had their own agricultural machinery in the study area.

1.0. Introduction:

The agriculture sector has witnessed phenomenal growth during the last several years. But it is still the mainstay of the Indian economy. It is contributing about 17.32 percent (*Economic Survey*) to the national income and providing employment to about 54.6 percent (*Census 2011*) of the total workforce in the country.

Wheat is the world's most widely cultivated staple food crop being grown since the prehistoric period and is consumed by various farmers by more than one thousand million in the world. Wheat plays an important role in shaping agriculture and food security missions. India is the second largest producer of wheat next to China. The area of wheat in India was reported at 30.31 million hectares (2019-20) with a total production of 100.42 million tonnes while productivity was recorded at 33.14qt/ha (*Agricultural Statistics at a Glance*, 2021).

Uttar Pradesh is the largest state with the maximum contribution towards national production (35.03 percent) from a large area (35.12 percent). The area under wheat in the 9852.0 thousand hectares and production is 35506.6 thousand tonnes (*Ministry of Agriculture and Farmers Welfare, GoI & Directorate of Economics and Statistics*, 2022)

The area under wheat and rice is continuously increasing in the state. The increase in area under wheat in the state is at the cost of decrease in area under other rabi crops like barley, gram *etc.*, These clearly indicate that the cropping pattern in the state is inclined towards Wheat-Rice rotation.

2.0. Methodology:

To assess the Economics analysis of Wheat cultivation Sitapur district of Uttar Pradesh using the multi-stage stratified random sampling technique. The Sitapur district was selected purposively in order to avoid operational in convenience. One block (Mahmudabad) having highest area under wheat crop was selected purposively and from selected block four villages were selected randomly. All the farmers of selected villages were classified into three categories namely, small (2.0 ha.), medium (2.1-6.0 ha.) and large farmers (above 6.0 ha.). A sample size of 24 farmers *i.e.*, 15 were small (62.50%), 06 were medium (25.00%) and 03 were large farmers (12.5%). The sample was conducted through personal interview and pretested schedule. The primary data was collected during the year 2021-22, and the required secondary data were also collected from the various published records of government offices, block development officer, reports, and other related agencies sources.

3.0 Results and Discussion:

3.1 Economics of Wheat Production:

The expenses incurred on wheat are categorized into four groups *i.e.*, fixed cost, variable cost, management charges and risk factor. Fixed cost includes rental value of land, preparatory tillage and pre-sowing irrigation and variable cost included cost of seed, sowing, fertilizer, irrigation, weeding, harvesting, thrashing and other charges. Average per hectare total expenses on three specified categories of wheat farmers were computed which is presented in the Table No. 1.

It was observed from the Table No. 1. that the average cost of wheat production was Rs. 56831.42 per hectare out of that 29.03 per cent was variable cost and 64.37 percent was fixed cost. Per hectare total variable cost was highest among small farmers followed by medium and large farmers but the fixed cost was comparatively highest of large farmers followed by medium and least in case of small farmers.

In case of small farmers variable cost expense incurred on threshing accounted maximum share of variable cost (6.37%) followed by harvesting (5.56%) and expense on fertilizers (4.40%) among medium farmers harvesting (3.98%) accounting the maximum share of variable cost followed by fertilizers (3.92%) and then thrashing (3.89%) while fertilizers contributed maximum (5.53%) followed by harvesting (3.76%) and threshing (2.31%) for large farmers. Among the fixed costs, rental value of land accounted for 52.36%, 58.73% and 63.67% for small, medium and large farmers respectively from total cost.

Table No. 1: Economics of Wheat production (in Percent)

Sr. No.	Particulars	Size of farm		
		Small (2.0 ha.)	Medium (2.1-6.0 ha.)	Large (6.0 ha.)
1.	Variable cost			
	Seed value	2.85	3.08	2.87
	Sowing	3.48	3.35	1.63
	Fertilizers	4.40	3.92	5.53
	Irrigations	2.42	2.08	2.08
	Weeding/Hoeing	1.91	2.17	2.37
	Plant protection chemicals	1.33	1.59	2.56
	Harvesting	5.56	3.98	3.76
	Threshing	6.37	3.89	2.31
	Transportation	1.24	1.08	0.98
	Interest on working capital @ 9% for six months	3.70	2.93	1.67
	Total Variable cost	33.26	28.07	25.76
2.	Fixed costs			
	Rental value of land	52.36	58.73	63.67
	Preparatory tillage	6.81	6.29	4.36
	Pre-sowing irrigation	0.27	0.29	0.31
	Total fixed cost	59.44	65.31	68.34
3.	Management charges	3.65	3.31	2.95
4.	Risk factor	3.65	3.31	2.95
	Total cost (1+2+3+4)	100	100	100

3.2 Cost and Income measures of Wheat cultivation

Cost and Income measures are presented in Table No. 2. The gross income per hectare, on an average worked out to be Rs. 59553.06 but it was much higher in case of medium (Rs. 59260.70) followed by small (Rs. 62526.90) and least among large farmers (56871.60). Average net income per hectare was Rs.2721.65 it was maximum in case of large farmers Rs. 3409.68, for medium it was Rs. 2695.72 and least in case of small farmers Rs. 2059.54. The average wheat production was 54.37 qtl/ha production of wheat was obtained highest by small farmers (56.55qtl/ha) followed by medium (53.84qtl/ha) and least for large farmers (52.73 qtl/ha). Benefit Cost Ratio maximum in case of large farmer's *i.e.*, 1.06, for medium 1.04 and 1.03 for small farmers.

Table No. 2: - Cost and Income measures of Wheat cultivation (in Rs/Ha)

Particulars	Small (2.0 ha.)	Medium (2.1-6.0 ha.)	Large (6.0 ha.)
Total variable cost	21635.90	17128.60	15330.48
Total fixed cost	38831.46	39436.38	38131.44
Total cost	60467.36	56564.98	53461.92
Gross return	62526.90	59260.70	56871.60
Net return	2059.54	2695.72	3409.68
Benefit Cost Ratio	1.03	1.04	1.06

4.0 Conclusion:

The study clearly shows that post-harvest and threshing land rental value contributes the most to the total cost of production for each category of farmers. The price of the crop does not increase in the proportion in which the cost increases. The large class of farmers used to get higher returns than the medium and small farmers, mainly because the large farmers had their own agricultural machinery in the study area.

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