

Comparison of Cost of Cultivation of Wheat in Punjab and Haryana, India

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Abstract - This study was carried out by interview and survey method in two different states of Haryana and Punjab. The cost of cultivation of wheat in Punjab and Haryana is precisely produced from one party to the third included as of in a system management. As wheat is an essential element in structure of grain consumption, the data is collected by survey method by few opted members of the group and finally that method is re-evaluated and verified by the collectors of farmers in the selected village. The material methods are as followed such as the formulations required for the tally finally. And finally, the data is accordingly preferred to be rearranged by the tables and the difference is shown accordingly in the tables formulated. Where after calculating the result, outcome preferred to be the total fixed cost is more in Punjab than Haryana and many other factors varied equally. In the total working cost Punjab is high when compared to Haryana with a huge margin. Hence the cost of cultivation of wheat is more in Punjab than Haryana where it is implied as functional in many ways according to the references collected from various websites and books referred.

INTRODUCTION

Wheat (*Triticum aestivum*) is second most importance cereal crop in India and play a significant role in nutrition and food security in the country. About 55% of the world population depends on wheat for their living. It is one of most grain foods in India and the diversity of environmental conditions and dietary habits of Indian population favors the cultivation of wheat in the country. Cultivation of wheat under often difficult production conditions, wheat producers have improved their production as well as their livelihoods and incomes, while preserving natural resources and building resilience to change climate, but the rate of adoption of sustainable practices is still relatively low and much remains to be done to ensure that agriculture achieves the full benefits. The shift to sustainable

intensification of wheat crop production requires fundamental changes in food security and agriculture. The cultivation of cereals is considered one of the first great discoveries to have had a major influence on the future of human societies. Even today, cereals constitute the basis of our diet, due to the ease of production, harvesting, storage and transport modes, the diversity of geographical areas of production, their richness in constituents of interest nutrition and the diversity of methods of preparation and consumption. Wheat is an essential element in the structure of grain consumption. It contributes enormously to the caloric and protein intake of the population across the country. The production of wheat is conventionally associated with the manufacture of many in the industrial level, in rural area the use of wheat in bread making is a common practice. About 85 percent of the annual wheat production is used in bread making. For rural populations, bread made from wheat is a fundamental component of the daily diet. A good wheat bread accompanied by mint tea is a practice that is well established in eating habits, especially in rural areas. Wheat constitutes an important part of the food resources of humans and animals. Wheat grains are one of the oldest species and constitute a large part of the diet of mankind, hence its economic importance. Wheat constitutes, almost, the totality of the nutrition of the world population is provided by food grains of which 95% are produced by the principal wheat crops. Grains are the staple food in many countries around the world. Production is most often intended for home consumption or for national markets: only around 10% of world production is traded on the international market.

MATERIALS AND METHODS

The data was collected by the survey method. The primary the data was collected for a period of two

weeks through interviews and survey with selected wheat producers on a well-structured and pre-tested schedule. Data concerning marketing costs and margins were collected from Punjab and Haryana during the investigation. Several visits were made from time to time in order to collect the information. The data collected has been verified by collectors from the village's farmers. Each precaution has been taken to ensure the accuracy and the reliability of the information. Information provided by respondents has been correctly edited by check and cross-check. The study was based primarily on primary data, but secondary data was also used. Secondary data were obtained from the files of the following collectors from the fields.

Analytical tools: The analysis tools contain both cost that is fixed and variable cost in determining the cost of cultivation of maize. The tools used are Average, gross returns, net returns and B: C ratio. Present lease value of land was use for land value cost.

Average – This is basic tool for the analysis of data. The formula used to calculate is given below.

$$\text{Average} = \frac{x_1 + x_2 + x_3 + x_4 + \dots + x_n}{n}$$

Depreciation cost- It was calculated to find the depreciated cost of an asset over time. Its functional form is given below.

Depreciation value /year = (cost of asset- scrap value of asset)/Depreciation rate per year

Where

Cost of asset is – initial cost of asset

Scrap value is – value of the asset after its useful life

Depreciation rate- Rate at which the asset is depreciates over the time

Gross returns – these are the returns before deducting any fee. Its functional form is given below

Gross returns = total yield × price

Net returns - These are the returns after deducting costs, *i.e.* gross returns minus Cost C. Its functional form is given below

Net returns = Gross returns – Cost of cultivation

Benefit cost ratio- It is an indicator use to analyse the whole value for money of a project and its functional form is given below

B: C = Net returns/ cost of cultivation

Interest on deposits - The amount of interest added by the end of a financial year is treated as income, which is then recorded as an account receivable on the business's balance sheet.

Interest = P*R*T/100

Where P is principal amount

R is rate of interest and T is time period

RESULT AND DISCUSSION

In this study, all the expenses and income related to cost of cultivation of wheat in Punjab and Haryana are shown in Tables 1 and 2.

Table1: The initial cultivation cost for growing wheat in Punjab and Haryana is listed in Table 1. Between these two States, the cost of wheat cultivation per hectare is revealed high in Punjab than Haryana respectively 88827.20 and 20687 according to Table 1. Average, the largest fixed cost share is estimated in Punjab with a value of the land rental cost owned (Rs 60,000) followed by depreciation on machinery (Rs 9,633.33), fixed interest (Rs 2,089.13). Punjab's total running average of Rs 71,722.27 is estimated to be the highest fixed cost while Haryana gets a lower average of Rs 56,484.33.

The average total working cost of Haryana Rs 20687.4 is estimated to be higher while Punjab procuring weighted average of Rs 16520.53. The largest average of all labours costs being higher in Haryana with an average expenditure of (Rs 5,036) in integrated labour including family, employees and animals, followed by intercultural operation and comparatively Punjab is approximately around (Rs 4079.33), the cost of land preparation is higher in Punjab than Haryana respectively (Rs2026.67) and (Rs 0). Punjab made the biggest investment for cultivation of wheat in the application of fertilizers especially phosphorus fertilizer in particular (Rs 4111.33) and nitrogen (Rs 1702.67), Haryana has the highest cost in fungicides and pesticides respectively (Rs646 .667) and (Rs 1330.667), with an average of (Rs 3056.67) for seeds of the wheat crop. Punjab has the lower interest rate on its operating cost of (Rs 505.20) just experienced than Haryana of (Rs 580.0667).

Table 2: It shows the average steady return for Punjab and Haryana. The average yield per hectare of the wheat crop was obtained at 52.80 quintals in Punjab, which is considered to be the lowest and Haryana has the highest at 59.8 quintals. Haryana is the state which abounds the highest average price per quintal for wheat cultivation with (Rs 1840) while Punjab is with Rs 1835. Haryana has achieved the highest average gross and net yield of wheat harvest with Rs 110,032

per hectare and Punjab has the lowest with an estimated gross yield of Rs 96,888.82 per hectare. The overall benefit-cost ratio of these two sample states is 0.54, Haryana obtains 0.43 respectively, which is more advantageous on the cost of the dividend rate of Punjab 0.11. In addition, Haryana has shown itself to be the most beneficial state for the cultivation of Wheat.

CONCLUSION

The cost of cultivation of wheat in Punjab and Haryana is precisely produced from one party to the third included as of in a system management. As wheat is an essential element in structure of grain consumption, the data is collected by survey method by few opted members of the group and finally that method is re-evaluated and verified by the collectors of farmers in the selected village. The material methods are as followed such as the formulations required for the tally finally. And finally, the data is accordingly preferred to be rearranged by the tables and the difference is shown accordingly in the tables formulated. Where after calculating the result, outcome preferred to be the total fixed cost is more in Punjab than Haryana and many other factors varied equally. In the total working cost Punjab is high when compared to Haryana with a huge margin. Hence the cost of cultivation of wheat is more in Punjab than Haryana where it is implied as functional in many ways according to the references collected from various websites and books referred.

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Table 1. Fixed cost, Working and Cost of cultivation of wheat in Punjab and Haryana

S.No	PARTICULAR	Weighted average (Rs/ha)	
		PUNJAB	HARYANA
1	Yield	52.80	59.8
2	Price / quintal	1835.00	1840
3	Gross Return	96888.80	110032
4	Net Return	8060.80	32860.27
5	B.C Ratio	0.11	0.434203

Table 2. Yield, Price/Quintal, Gross return and Benefit Cost Ratio

S.No	PARTICULAR	PUNJAB	HARYANA
A	Fixed Cost		
1	Rental value of owned land	60000	40100
2	Land revenue	0	0
3	Depreciation on machine per annum	9633.33	13240
4	Depreciation on building per annum	0	0
5	Insurance	0	1500
6	Interest on fixed cost	2089.13	1644.33
	Total Fixed Cost	71722.47	56484.33
B	Working Cost		
1	Labour		
a.	Family labour	870	970
b.	Hired labour	1046	1380
c.	Animal labour	0	0
2	Land preparation	2026.67	0
3	Seed	3056.67	2216.667
4	Manures	700	4580
5	Fertilizers		
a.	N	1702.67	803.3333
b.	P	4111.33	3946.667
c.	K	0	0
6	Plant protection		
a.	Seed treatment	0	0
b.	Fungicides	198	646.667
c.	Pesticides	1136.67	1330.667
7	Irrigation	920	1546.667
8	Intercultural operation	2163.33	2686.667
9	Interest on working cost per annum	505.20	580.0667
	Total working Cost	16520.53	20687.4
	Cost of Cultivation	88827.20	20687