COMPARISON OF COST OF CULTIVATION OF WHEAT IN PUNJAB, HARYANA AND ANDHRA PRADESH, INDIA

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ABSTRACT

The study was concluded in three states Haryana, Punjab and Andhra Pradesh to find out the cost of cultivation of wheat. 20 farmers from each district were taken of growing areas of wheat. The findings revealed that Andhra Pradesh was the highest average cost of cultivation per hectare and the average per hectare yield was from Bhiwani distict of Haryana which was 67 quintals. The highest average cost of cultivation per hectare enumerated for wheat among the 3 sampled states is Andhra Pradesh which is Rs 59,437 while Punjab holds an intermediate cost of Rs 51,271 and the lowest is of Haryana which is computed around Rs 15,018.The average total fixed cost was obtained maximum in Andhra Pradesh is Rs115332 as compared to the other 2 states with respective figures of Rs 44659 for Haryana and Rs 37296 for Punjab.

Introduction

In India, most of the crops are raised under rainfed/dry farming conditions, while the staple food crops receive irrigation; thus leaving the wheat crops thirsty and hungry by the resource poor farmers. The option available is to go for multiple cropping system based on the time and resources available, particularly soil moisture so that the production of wheat could be improved per unit area and time through adoption of either intercropping or sequential cropping system or both.

Wheat is a valuable crop playing an important role in agricultural economy of arid and semi arid regions. India accounts for nearly 14% of wheat area and 45% world wheat production. Presently, India is producing value added product hydrogenated castor oil, dehydrated castor oil, hydroxystearic acid and lubricants of jet

engines. Five fold higher foreign exchange can be accrued by VAP. Hence, there is a need to develop the technology to increase wheat crop. Wheat is considered as one of the major commercial crops of the world.

Wheat is grown on more area than any other crop throughout the world. In trade the value of wheat traded is highest among all. The world production of the crop is 780 million tons, with a forecast of 2020 production at 795 million tonnes which is second highest after maize. It is an important source of carbohydrates. Crop rotation and fertilizers can be used to improve plant growth and harvesting methods. It will help to promote wheat as viable crop in soil preparation and seed placement at planting time.

Yields of wheat increased as methods of crop rotation were applied to long cultivated land, and the use of fertilizers became widespread. Improved agricultural husbandry recently included tractor-drawn cultivators, reaper-binder machines and better varieties. Wheat is an significant crop as it get better and regular income because of its regular demand in day to day dietary system. Wheat can be ground into flour. The raw wheat is broken into parts at the mill, the outer husk or bran can be used several ways. Wheat is used to make bread, biscuits, pancakes, pasta and noodles, cakes, cookies and breakfast cereals.

Thus, the main objective of this research paper is to study cost of cultivation of wheat in different states.

Material and Methodology

This Methodology was done in two parts-

• Survey part

• Analytical part

Survey was conducted in 3states Punjab (Taran taran dist. village wan tara singh), Haryana (Bhiwani dist. Kairu block. Dharwanbaas village) and Andra Pradesh (Guntur dist. Sringar block. Janapadu village). 20 farmers from each states has been taken which were growing wheat in their area. Meeting was conducted among farmers and us. Well-structured schedule has been prepared so that we could collect a proper survey from the farmers of these three states.

Following are the analytical tools used after the survey part-

1.Depreciation- D measures for fixed cost formula. Depreciation is the decrease in the value of assets and the method used to reallocate, such as equipment) over its useful life span. **Depreciation**- (Fixed Asset cost - salvage value)/Useful lifespan of asset.

2.Interest-The price paid for the use of credit or money. It may be expressed either in money terms or as a rate of payment.

The **formula** to calculate <u>Interest</u>- P x R x T ÷ 100, where P = Principal, R = Rate of **Interest** and T = Time Period of the Loan/Deposit in years.

3.Gross return-The gross rate of return is the total rate of return on an investment before the deduction of any fees, commissions, or expenses. The gross rate of return is quoted over a specific period of time, such as a month, quarter, or year.

Gross return=Net sales+ discounts +sales returns+ sales allowances

4.Net return- The amount of money received from an investment or a company's activities after all costs have been paid. The average net return is 6.5% investment return minus a 0.5% charge for fees.

Net return=(Net Return on Investment/cost of investment) ×100

5.Benefit cost ratio- A benefit–cost ratio is an indicator, used in cost–benefit analysis, that attempts to summarize the overall value for money of a project or proposal.

Benefit cost ratio= Present value of benefit expected from the project/ present value of the cost of project

6.Average- It refers to the average output (or products) produced by each input (factors of = like labor and land).

Avg= (a + b + c + …)/n ;where n is the total number of values present in set.

RESULT AND DISCUSSION

Average weighted cost of cultivation for wheat crop (Fixed cost + Working cost):

The highest average cost of cultivation per hectare enumerated for wheat among the 3 sampled states is Andhra Pradesh which is Rs 59,437 while Punjab holds an intermediate cost of Rs 51,271 and the lowest is of Haryana which is computed around Rs 15,018.The average total fixed cost was obtained maximum in Andhra Pradesh is

Rs115332 as compared to the other 2 states with respective figures of Rs 44659 for Haryana and Rs 37296 for Punjab.

On an average the uppermost share of fixed cost was born in Andhra Pradesh with rental value of owned land (Rs 134675) followed by depreciation on machines (Rs 6154, interest fixed cost (Rs3282) and depreciation on buildings (Rs 0). The average total working cost of Haryana Rs 18663 was valued to be the highest while AP and Punjab procuring weighted averages of Rs 15003 and Rs13975.

Average weighted returns for 3 different states:

The average per hectare yield of wheat crop was obtained 67 quintals for Bhiwani district of Haryana which is deemed to be the highest while it was 59 quintals in Erode district of Punjab & Andhra Pradesh merely contributing the least average yield of 55 quintals. The state that claimed chief average price per quintal for wheat was Haryana with Rs 1955 as computed while Punjab and Andhra Pradesh received rational returns of Rs 1925 and Rs 1920. The average gross and net return from the wheat crop was obtained highest in Punjab of Rs 114249 per hectare and in Haryana Rs 94340 per hectare while Rs 108035 of gross return per hectare and Rs 64362 of net return per hectare was achieved in Andhra Pradesh earning the second highest profit & Haryana managing the lowest with an estimated gross return of Rs 90350 per hectare and estimated lowest net return was Punjab of Rs 62978 per hectare altogether. The benefit cost ratio is estimated highest in Andhra Pradesh which is 3.0 followed by Punjab which is 2.88 and Haryana is 2.57.

Conclusion

The study concluded that wheat is a valuable crop playing an important role in agricultural economy of arid and semi arid regions. India accounts for nearly 14% of wheat area and 45% world wheat production. Based on findings we concluded that Wheat should be grown at Haryana. The benefit cost ratio is estimated highest in Andhra Pradesh which is 3.0 followed by Punjab which is 2.88 and Haryana is 2.57. The highest average cost of cultivation per hectare enumerated for wheat among the 3 sampled states is Andhra Pradesh which is Rs 59,437 while Punjab holds an intermediate cost of Rs 51,271 and the lowest is of Haryana which is computed around Rs 15,018. It can be said that it will be better to grow wheat in Haryana as the production of yield is highest there.

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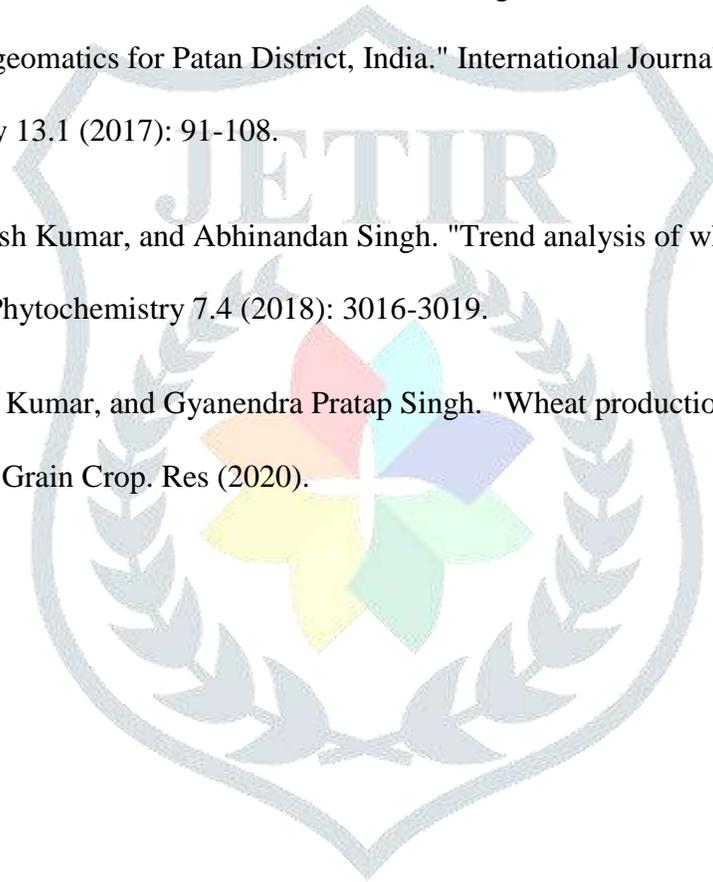
Table1. Fixed cost, working cost and cost of cultivation of wheat on sampled farms.

S.No	Particulars	Weighted average (Rs/ha)		
		Punjab	**AP**	**Haryana**
A.	Fixed Cost			
1.	Rental value of owned land	23725	134675	6075
2.	Depreciation on machines	11463	6154	2600
3.	Depreciation on buildings	0	0	0
4.	Interest on Fixed cost	2109	3282	1380
	Total Fixed cost	37296	115332	44659
B.	Working Cost	0	0	1025
1.	Labour	0	0	1215
a.	Family labour	1410	2320	1200
b.	Hired Labour	965	2275	650
c.	Animal Labour	0	3599	1120
2.	Land preparation	1870	2345	3018
3.	Seeds	1683	2104	1820
4.	Manures	975	3393	4600
5.	Fertilizers	0	3498	0
a.	N	2590	3061	2500
b.	P	3000	2930	3000
c.	K	0	0	0
6.	Plant protection measures	0	0	0
a.	Fungicides	266	400	335
b.	Pesticides	450	480	656

7.	Irrigation	0	3315	7
8.	Intercultural operations	0	1403	0
9.	Interest on Working Cost	796	793	660
	Total Working cost	13975	15003	18663
	Total cost	51271	59437	15018

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

Returns

S.No	Particulars	Weighted average (Rs/ha)		
		Punjab (Tarn tara)	AP (Guntur)	Haryana(Bhiwani)
1.	Yield	59	55	67
2.	Price / quintal	1925	1920	1955
3.	Gross return	114249	108035	90350
4.	Net Return	62978	64362	94340
5.	B:C Ratio	2.88	3.0	2.57