

Profitability of Wheat Production in Nawa District of Helmand Province, Afghanistan

Ali Ahmad¹, Shah Mahmood Baray², Baryalai Rafi³, Naqibullah Mujadidi⁴ and Sifatullah Ashna⁵

¹ Assistant Professor and Chief of Research and Publication, Faculty of Economics, Bost University, Helmand Province Afghanistan

² Professor, Department of Agronomy, Kandahar University, Kandahar Province Afghanistan

³ Assistant Professor and Dean of Agriculture Faculty, Department of Horticulture Helmand Institute of Higher Education, Afghanistan

⁴ Assistant Professor, Department of Horticulture, Kandahar University, Afghanistan

⁵ Assistant Professor, Faculty of Economics, Bost University, Afghanistan

Abstract:- This study sought to assess the cost and gross margin of wheat in Nawa District of Helmand Province, Afghanistan. In the wheat crop season during December 2020 - June, 2021. A survey method was employed and six (6) villages were selected at random which are the major wheat producing villages in the said district. A total of 80 respondents (growers) were probed by personal interview method from the sampled villages. Cost and return (gross return) data from the respondents were analyzed. Farm budgeting technique for estimating cost, gross return and profitability was applied. The analysis of data revealed that the average cost per Jerib was Af. 14355. Similarly, average production of wheat (output) was estimated 1006 kg/Jerib (0.2 ha.) Thus the gross return was Af. 28972.8/Jerib, whereas the net return (profit) from wheat production was Af. 14617.8/Jerib. It is thus concluded that profit is under the direct positive influence of price and output of wheat grain whereas cost had negatively affected the wheat profitability.

Keywords:- Wheat, Cost, Profitability and Net Return.

I. INTRODUCTION

Wheat (*Triticum aestivum*) is the important food grain and food source of the country which provides a large fraction of the dietary protein of total food supply. It contributes more calories and proteins to the world diet than any other cereal crops. Wheat flour is used to prepare chapattis, bread, pasta, biscuits, noodles and semolina etc. Wheat is also used to prepare ethanol, beer, wheat based raw material for cosmetics, polymers, adhesives, resins etc. Wheat germ and bran is a good source of dietary fibre helping in the prevention and treatment of some digestive disorders, tooth disorders, skin diseases and tonsil pain etc. The nutritive value of wheat arises from its unique combination of a large number of constituents including carbohydrates, protein, fat, vitamins, mineral and fiber etc. The ideal temperature for its sowing and growth period ranges from 20°C to 25°C. It requires bright sunny weather at the time of maturity. It can be grown in all type of soils having a pH ranges from 5 to 7.5. The relative humidity of 60-70 per cent is favorable during the growth period of this

crop. Generally, stem of wheat plant erect, cylindrical, smooth and elongate up to 80 to 120 cm. Leafs is generally long and synchronies ranges from 4-5 number, initiate with cover the stem of plant. Grain of wheat is covered by very thin pericarp layer which contains three parts i.e. the bran, endosperm and germ (Pallewar, 2012).

1.1 Objectives of the Study

1. To work out the cost of production of wheat of selected growers.
2. To find out and analyze the gross return and net return of wheat production in the study area.

II. MATERIALS AND METHOD

The present study was conducted in December 2020 - June 2021. The sample area comprises major wheat producing locations in six (6) villages of Nawa district. These villages were selected randomly with the cooperation of local residents and farmers. All the wheat growers in the area were considered as population among which 80 respondents (growers) were contacted as a sample for study. Structured interview pattern was made to collect quantitative data. The interview pattern was pre tested for fine results and necessary changes were made. Interview questionnaire was used during a survey to collect information. Growers were contacted individually at their fields. The questions were clarified to the growers to get first-hand information. The interview was based on various questions including land holding, total cultivated area, area under wheat cultivation, various inputs used, etc. Main focus was on the various inputs used which has an impact on profitability and cultivation enhancement, suggestions of growers and kind of help they need.

Statistical Analysis

Econometric view (E-view) package was used for data analysis. The procedure applied was as follows:

Wheat Profit Function

Profit or net revenue = total revenue (TR) - total cost (TC)
(NR) = TR – TC -----(1)

where,

TR = P*Q (P = price of output and Q = output)
 TC = V*X (V = input price and X = input purchased)
 therefore
 (NR) = PQ – V X------(2)

pesticides, and harvesting, threshing etc. There exists some difference between the costs of wheat production of different respondents due to the variations in price of the input variables. On average total cost of wheat production per Jerib was Af. 14355 (Table & Fig 1). This includes all costs incurred on the variable inputs. On average wheat yield (output) of 1006 Kg per Jerib was obtained. The gross return from the wheat grain per Jerib was Af. 28972.8 Wheat straw was stored at the home and used as a ration for animals and also for some other domestic purposes.

III. RESULTS AND DISCUSSION

3.1 Cost of Production of Wheat per Jerib:

The major components in the cost of wheat production were variable cost that includes land preparation, seed, chemical fertilizer, irrigation water, weeding/hoeing,

Table 1: Cost of production of wheat in Nawa District (Per Jerib)

S.No.	Inputs	Unit	Quantity	Rate/Unit (Af.)	Total Cost (Af.)
1	Labour Family and Hired)	PDs	-	-	480.00
2	Land preparation	Af.	-	-	1250.00
3	Seed	Kg	25	35	875.00
4	Urea	Kg	50	19.6	980.00
5	DAP	Kg	25	24.8	1240.00
6	FYM	Trolley	45	39.11	1760.00
7	Irrigation	Af.	-	-	256.00
	Weeding	PDs	-	-	300.00
8	Pesticides	Bottles	1	289	289.00
9	Harvesting	Per Jerib	-	-	1255.00
10	Threshing	Per Jerib	-	-	970.00
11	Empty bags	Per pag	20	10	200.00
12	Farmer share	1/6th	-	-	4120.00
13	Depreciation of fixed capital	-	-	-	380.00
Total Cost					14355.00

Note: 1 Jerib = 0.2 hectare

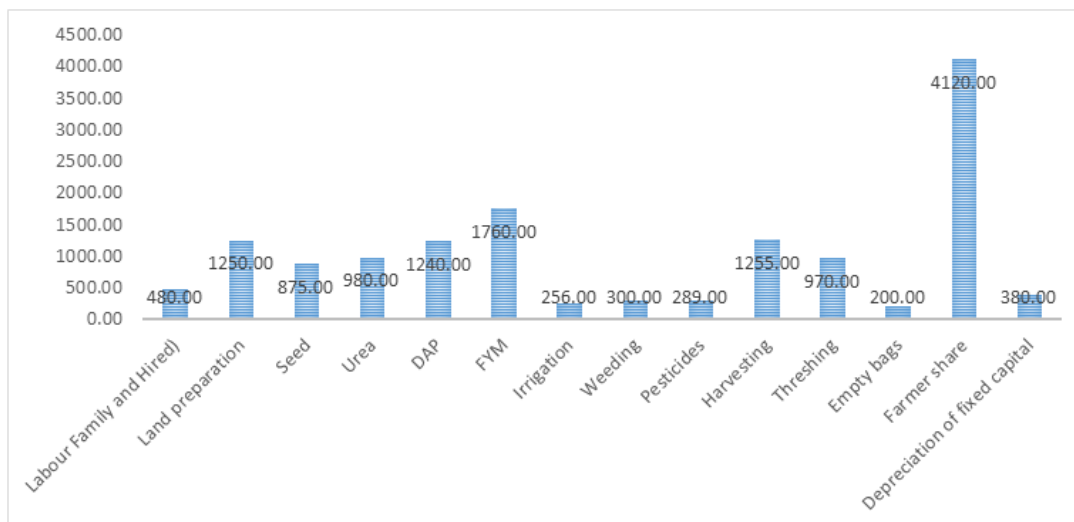


Fig 1: Cost of production of wheat per Jerib

3.2 Profitability and Net Return of Wheat Production per Jerib

Net return per Jerib is calculated using equation (1) as:
 Net return = gross return per Jerib – total cost per Jerib = 14617.8 Af./Jerib (Table and Fig 2). Three main factors that determine the net return from wheat production per Jerib are:

- (1) P = Price of output received by the growers.
- (2) Q = Output of wheat production.
- (3) C = Cost of wheat production.

Table 2: Profitability and Net Revenue of Wheat per Jerib

Production of wheat (Kg/Jerib.)	1006
Gross Return (Af./Jerib)	28972.8
Total Cost (Af./Jerib)	14355
Net Return (Af./Jerib)	14617.8

Note: 1 Jerib = 0.2 hectare

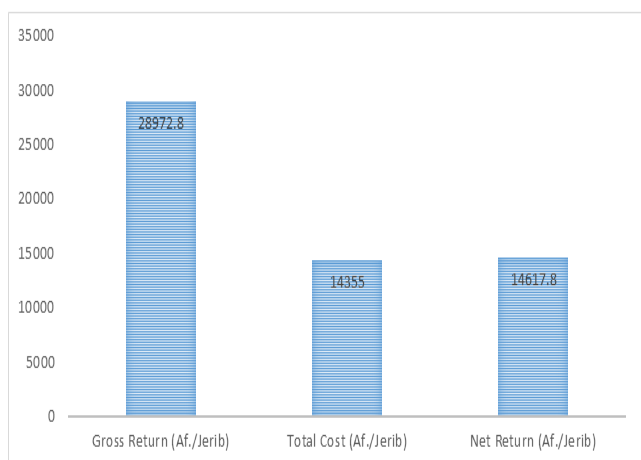


Fig 2: Net Return of wheat production per Jerib

IV. CONCLUSION

From the findings of the study following conclusion has been derived.

1. The cost of cultivation is maximum in farmer share which is Af. 4120, followed by fertilizer (Af. 3980) per Jerib.
2. On average the total cost of cultivation of wheat was calculated Af. 14355 per Jerib.
3. The cost and return analysis revealed that wheat production in the study area was profitable with the net farm income of Af. 14617.8 per Jerib.
4. The average yield per Jerib of wheat came to 1006 Kg.
5. The major problem associated in marketing of wheat is lack of processing industries, storage facilities, lack of regulated and cooperative market, fluctuation of prices, high transportation charges and lack of awareness about market information were found.

RECOMMENDATIONS

1. Considering the economic importance and potential of wheat production and marketing, there is the need for the Government to address the problems (such as lack of storage, lack of resources, inadequate training facilities etc.) In order to sustain the potential of the crop.
2. Farmers should be encouraged to form cooperative or group through which they can be easily reached by the government. The grouped farmers can also empower themselves through group benefits such as group lending, group marketing and group procurement of inputs and this will also reduce role of commission agent.
3. Farm inputs such as fertilizer, pesticides and improved seed varieties should be made available by the appropriate body in time and at affordable prices to avoid the underutilization of the inputs.
4. Irrigation facilities are to be developed in the proper way so that farmers can adopt improved technologies with assured irrigation facilities.

5. Good and cheap transportation and infrastructural facilities are required to be developed in the study area in order to export the wheat in large distant places.

REFERENCES

- [1]. **Annual Agriculture Statistics (2010)**. Commissioner of Land Records and Settlements, Gwalior, Madhya Pradesh.
- [2]. **Anonymous (1982)**. Marketing of Wheat in Punjab and Haryana. Market Research and Planning Cell, Directorate of Marketing and Inspection, Ministry of Rural Reconstructions, pp: 118.
- [3]. **Banafar, K.N.S. (2005)**. Economics of Wheat Cultivation in Sehore District of Madhya Pradesh. *Agricultural Marketing*, **48**(3):18-22.
- [4]. **Chhattisgarh Annual Agriculture Statistics (2010)**. Directorate of Agriculture, Raipur.
- [5]. **Dwivedi, Sudhakar and N.P. Singh (2000)**. A Study of Resource Use Efficiency of Wheat Crop in Agra District. *Journal of Agriculture and Scientific Research*, **36**(1/2): 14-18.
- [6]. **Goel Veena (2000)**. A Study of Market Arrivals and Procurement Pattern of Wheat by Public and Private Agencies in Punjab. *Indian Journal of Regional Science*, **32**(2):94-102.
- [7]. **Gupta, V.K. and D.P. Mathur (1976)**. Wheat Production, Marketing and Procurement- a study in selected surplus and deficit areas. Center for Management in Agricultural, *Indian Institute of Management, Ahmedabad, Gujarat, India*, **42**(11) pp: 292
- [8]. **Jain, K.K. (1993)**. An Appraisal of Costs and Prices on Different Farms in Punjab. *Agricultural Situations in India*, **47** (10):763-773.
- [9]. **Kumar, Anuj and Randhir Singh (2009)**. Wheat Production Constraints in Jharkhand. *Agricultural Extension Review*, pp: 26-30.
- [10]. **Kumar, Arun, J.K. Gill and Manish Sharma (2003)**. Economics of Wheat Cultivation at Village Bedayal Brahaman of R.S. Pura Block in Jammu District of Jammu and Kashmir State. *Agricultural Marketing*, **46**(1):25.
- [11]. **Kumar, S., Rajesh Kumar Gaur and B. Anil Kumar (2008)**. A Study on Marketing of Wheat and Mustard in Allahabad District of Uttar Pradesh. *Agricultural economics research review*, (21):461.