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Economic analysis and constraints faced by sunflower cultivation in Haryana

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Abstract

This study aimed to assess the economic analysis and constraints faced by sunflower cultivation in eastern Haryana, specifically with the specific objective of economic analysis and identifying factors affecting production and marketing in the study area. A total of 50 farmers from two districts (Kurukshetra and Ambala) 25 farmers from each district were sampled. The result of the study revealed that the overall average total cost and gross return of sunflower cultivation was Rs. 111367 and Rs. 134644 per hectare, respectively. The return over variable cost and net return were Rs. 78804 and Rs. 23277 per hectare, respectively. Moreover, the value of overall B-C ratio was 1.21 which indicated the economic viability of sunflower cultivation in the study area. Major production problems were low productivity of crop followed by high incidence of insect pests/birds, shortage of human labour and high post-harvest losses. Similarly, major marketing problem were lower price of the produce followed by less number of buyers and lack of markets access, non-availability of processing facilities in the area, problem of moisture contents and high transportation cost *etc*.

Keywords: Sunflower, constraints, production, marketing, B-C ratio

Introduction

India is the 4th largest oilseeds producer in the world. it has 20.8% of the total area under cultivation globally, accounting for 10% of global production. in the country produces groundnut, soybean, sunflower, sesamum, Niger seed, mustard and safflower oilseeds. Nearly 72% of the oilseeds are is restricted to rainfed farming done by small farmers which lead to poor productivity. However, a breakthrough was realized in oilseed production through introducing latest crop production technologies. Consequently, the oilseed production grew to 365.65 tonnes in 2020-21 from 108.3 lakh tonnes in 1985-86. The largest oilseed producing states in India including Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. Out of these states, Rajasthan, Gujarat, Madhya Pradesh and Maharashtra are the top producers with a share of about 20% 20% 19% and 16% of the total production, respectively (Govt. of India, Ministry of Commerce and Industry, Department of Commerce, 2025) [3].

Sunflower (*Helianthus annuus L.*) is an important oilseed crop in India popularly known as "Surajmukhi". It occupies an area of 228 thousand hectares with productivity of around 931 kg/ha during 2019-20 (Indiastat, 2023) [5]. Among the total oilseed crops sunflower occupied 84 thousand ha area. In oilseeds production, Maharashtra stands fourth and third in sunflower production among the states. The Government of India has launched the new scheme, "Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM)" which provides flexibility to states these implement in the scheme based on a regionally differentiated approach for promoting crop diversification. In order to achieve, the required production level of Sunflower through higher productivity, in depth analysis of Sunflower production methods and adoption pattern of technology is necessary.

Methodology

The present study was conducted in Haryana state. Multi-stage stratified sampling was used for the selection of primary data of the study Sunflower was selected on the basis of highest area. For the present study, Kurukshetra and Ambala districts were selected purposefully. From each district 25 farmers selected. Total fifty farmers were selected randomly from selected districts. Both primary as well as secondary data were used for the present study. Information regarding various cost components in production of sunflower crop *viz.*, costs of various inputs, quantity through personal interview method on pre-structured data schedule.

Results and Discussion

Cost and returns of sunflower cultivation

The item wise break-up of cost of sunflower cultivation in Kurukshetra & Ambala districts and overall average are presented in table 1. Per hectare total cost of sunflower cultivation in Kurukshetra and Ambala districts were Rs.

110358 and Rs. 112375, respectively. Total variable cost was Rs. 55168 and Rs. 56510 in Kurukshetra and Ambala districts, respectively. Expenditure on field preparation, seed & sowing, manure & fertilizers, plant protection chemicals, irrigation and harvesting & threshing were the important component of total variable cost.

Table 1: Cost and returns of sunflower cultivation in Haryana (Rs./ha.)

S. No.	Particulars	Kurukshetra		Ambala		Overall	
		Qty	Value	Qty	Value	Qty	Value
1	Field Preparation	5.6	10775 (9.76)	5.8	11130 (9.90)	5.7	10953 (9.83)
2	Seed (Kg.) & sowing	3.7	11310 (10.25)	3.9	11885 (10.58)	3.8	11598 (10.41)
3	Manure & fertilizer		8519 (7.72)		8530 (7.59)		8525 (7.65)
4	Irrigation	7.1	2124 (1.92)	7.3	2184 (1.94)	7.2	2154 (1.93)
5	Plant protection		8575 (7.77)		8590 (7.64)		8583 (7.71)
6	Harvesting & Threshing		12000 (10.87)		12280 (10.93)		12140 (10.90)
	Total (1 to 6)		53303 (48.30)		54599 (48.59)		53951 (48.44)
7	Interest on working capital		1866 (1.69)		1911 (1.70)		1888 (1.70)
8	Variable cost		55168 (49.99)		56510 (50.29)		55839 (50.14)
9	Management & risk factor		6790 (6.15)		6939 (6.17)		6864 (6.16)
10	Transportation		800 (0.72)		776 (0.69)		788 (0.71)
11	Rental value of land		47600 (43.13)		48150 (42.85)		47875 (42.99)
12	Total Cost		110358 (100.00)		112375 (100.00)		111367 (100.00)
13	(a) Main production (qt)	20.5	132225	21.25	137063	20.9	134644
14	Gross return		132225		137063		134644
15	Return over variable cost		77057		80552		78804
16	Net return		21867		24687		23277
17	B: C		1.20		1.22		1.21

Note: Figures in parentheses indicate the percentages to the total cost, Price received by farmers include Rs. 1000/q. incentive given by Govt.

The expenditure incurred on harvesting & threshing was the highest and workout to be (10.87 & 10.93%) followed by seed & sowing (10.25 & 10.58%), field preparation (9.76 & 9.90%), plant protection chemicals (7.77 & 7.64%), manure & fertilizers (7.72 & 7.59%) and irrigation (1.92 & 1.94%) in Kurukshetra and Ambala districts, respectively. Similarly, rental value of land and management & risk factor were the major components of fixed cost, which accounted for Rs. 47600 & Rs. 6790 and Rs. 48150 & Rs. 6939 per hectare in Kurukshetra and Ambala districts, respectively. The gross return of sunflower cultivation in Kurukshetra and Ambala districts was Rs. 132225 and Rs. 137063 per hectare, respectively. The return over variable cost and net return in Kurukshetra and Ambala districts were Rs. 77057 & Rs. 21867 and Rs. 80552 & Rs. 24687 per hectare, respectively. The cost benefit ratio in Kurukshetra and Ambala districts was 1.20 and 1.22, respectively. Das and Rout 2018 [2] were also observed the similar observations.

Similarly, overall average per hectare total cost and variable cost of sunflower cultivation was Rs. 111367 and Rs. 55839, respectively. The expenditure incurred on harvesting & threshing was the highest and workout to be (10.90%) followed by seed & sowing (10.41%), field preparation (9.83%), plant protection chemicals (7.71%), manure & fertilizers (7.65%) and irrigation (1.93%). Similarly, average rental value of land and management & risk factor were the major components of fixed cost, which accounted for Rs. 47875 & Rs. 6864 per hectare, respectively. The overall average gross return of sunflower cultivation was Rs. 134644 per hectare. The return over variable cost and net return were Rs. 78804 and Rs. 23277 per hectare, respectively. Moreover, the value of overall B-C ratio was 1.21 which indicated the economic viability of sunflower cultivation in the study area. Similar observations were also recorded by Kumar *et al.*, 2023 [6].

Production and marketing constraints faced by sunflower growers

The production and marketing constraints faced by growers in sunflower cultivation are presented in table 2. Major production problems were the low productivity of crop as revealed by 92.00 per cent of the growers followed by high incidence of insect pests/birds (90.00%), poor quality of seed (76.00%), shortage of human labour (74.00%) and high post-harvest losses (62.00%). Other production problems were less profitability of oil seeds as compared with other crops reported by 52.00 per cent growers and shattering of seed due to untimely rainfall (46.00%). Similar observations were also recorded by Hulmani *et al.*, 2023 [4]

Similarly, major marketing problems faced by sunflower growers were the lower price of the produce as revealed by 84.00 per cent of the growers followed by less number of buyers and lack of markets access (78.00%), non-availability of processing facilities in the area (68.00%), problem of moisture contents (62.00%), high transportation cost (52.00%) and exploitation by market intermediaries as reported by 38.00 per cent of the growers. Similar observations were also recorded by Adicha *et al.*, 2023 [1].

Table 2: Constraints faced by farmers for the cultivation of sunflower in Haryana N=50

S. No.	Production constraints	No. of respondents	Percentage
1	Problem of low productivity	46	92.00
2	Incidence of insect pests/birds (caterpillar, parrot, sparrow)	45	90.00
3	Shortage of human labour	37	74.00
4	High post-harvest losses	31	62.00
5	Less profitability of oil seed as compared with other crops (spring maize, tomato)	26	52.00
6	Shattering of seed due to untimely rainfall	23	46.00
	Marketing constraints		
1	Lower price in the market	42	84.00
2	Less number of buyers and lack of markets access	39	78.00
3	Non-availability of processing facilities in the area	34	68.00
4	Problem of moisture contents (Drying of produce)	31	62.00
5	High transportation costs	26	52.00
6	Exploitation by market intermediaries	19	38.00

Conclusion

The study concluded that the major components of variable cost in sunflower cultivation were expenditure incurred on harvesting & threshing followed by seed & sowing, field preparation, plant protection, manure & fertilizers and irrigation in both the districts and overall average. Similarly, rental value of land and management & risk factor were the major components of fixed cost in both the districts and overall. The cost benefit ratio was more than one in both the districts and overall average which indicated that sunflower cultivation in the study area was profitable. Major production problems were low productivity of crop followed by high incidence of insect pests/birds, shortage of human labour and high post-harvest losses. Similarly, major marketing problem were lower price of the produce followed by less number of buyers and lack of markets access, non-availability of processing facilities in the area, problem of moisture contents and high transportation cost *etc*.

References

1. Adicha A, Darcho D, Ermias G. Assessment of production constraint and marketing status of sunflower production in South Omo Zone, Southern Ethiopia. J Agric Aquacult. 2023;5(1).
2. Das LK, Rout RK. Economic analysis of sunflower enterprise in Western Odisha. Int J Pure Appl Biosci. 2018;6(4):498-505.
3. Govt. of India, Ministry of Commerce and Industry, Department of Commerce. India is the 4th largest producer of sunflower seed. Available from: https://www.indiantradeportal.in/vs.jsp?lang=0&id=0,31,24100,29403#:~:text=India%20is%20the%204th%20largest,seed%2C%20mustard%20and%20safflower%20oilseeds (Accessed: Mar 5, 2025).
4. Hulmani S, Vignesh, Shridhar. Constraints of sunflower production in India. Vigyan Varta. 2023;4(5):31-33.
5. Indiastat. Available from: https://www.indiastat.com/data/agriculture?gad_source=1&gclid=Cj0KCQiA8fW9BhC8ARIsACwHqYofZ_AA-fZky3y1OAVLP9PVlTbJCr9Q-CWVtb0We8qKjiKlf9WB90kaAtkqEALw_wcB (Accessed: Mar 5, 2025).
6. Kumar M, Malik DP, Singh A, Kumar A. Economic analysis and resource use efficiency of sunflower cultivation in Haryana. Indian J Ecol. 2023;50(5):1812-1815.