



Analysis of the constraints on mustard production and marketing in Gujarat's Banaskantha district

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ABSTRACT

A study on mustard constraint analysis was conducted in the 2021–2022 agricultural year. The study was carried out in the North Gujarat region's Banaskantha districts, which make up 73.70 percent of the state's total mustard acreage. Using a multistage sampling technique, taluka, villages, and sample farmers were chosen. Two Talukas—Tharad and Dhanera—were specifically chosen from the Banaskantha district. From each chosen taluka, five villages were chosen at random. Twelve farmers who grew mustard were chosen at random from each village. As a result, 120 mustard-growing farmers from 2 talukas and 10 villages were chosen for the study. Twenty market officials were randomly selected from the Dhanera and Lakhani-controlled marketplaces for this research. Additionally, ten processors from the Banaskantha district were incorporated. Primary data was collected during the Rabi season of 2021–2022, utilizing a meticulously organized and verified interview schedule. The Directorate of Horticulture, Government of Gujarat, Gandhinagar, and the Ministry of Agriculture and Farmers Welfare, Government of India, were the sources of secondary data. The main production obstacles that mustard farmers had to deal with were low awareness and the high expense of inputs and plant protection agents. According to the farmers, growing labor and transportation costs, together with a lack of understanding of marketing strategies, were the main marketing obstacles.

Keywords: Mustard production, marketing, agriculture

Introduction

India is the seventh largest and second most populous country in the world in terms of land area. It is endowed with an abundance of natural resources and human capital. The agricultural sector is the primary source of income for the overwhelming majority of the population, and the economy of the nation is primarily reliant on it. It greatly aids in obtaining foreign exchange, allowing us to import necessities and capital products. Among the oilseed crops cultivated in the nation, mustard is the most significant crop. Because of its industrial usage as well as its contribution to the nation's agricultural output, it is worth considering.

It is the most significant oil seed crop in the country due to its versatility in the production of soaps, lubricants, textiles, and other accessories, in addition to producing sustenance for the general public. Under India, mustard is cultivated under a variety of agroclimatic conditions, including saline soils, timely/late sowing, rain-fed irrigation, and mixed cropping, from the northeastern and northwestern hills to the south. Eleven percent of the world's mustard is produced in India. About 6.78 million hectares of mustard are grown in India, where 9.12 million tons were produced in 2019–20. However, the output is still just 1345 kg per hectare. The four states that produce the most mustard in India are Madhya Pradesh, Uttar Pradesh (10.50%), Haryana (12.61%), and Rajasthan (46.28%).

With 4.22 million tons produced annually, Rajasthan is the state that produces the most mustard in India. Gujarat, however, produces the most mustard in the nation, at 1932 kg per hectare (Ministry of Agriculture and Farmers Welfare, Govt. of India, 2020). Banaskantha district was the largest district in Gujarat in terms of area (73.70%) in 2019–20. 3.33 lakh tonnes of mustard are produced on 1.72 lakh hectares of mustard

farming in Gujarat, with a productivity of 1932.25 kg per hectare. In 2019–20, Banaskantha (1.27 lakh ha) and Patan (0.19 lakh ha) and Mehsana (0.13 lakh ha) share the district's largest area contribution.

In Banaskantha district, mustard cultivation spanned 1.27 lakh hectares, yielding 2.55 lakh tonnes at a productivity rate of 2005 kg/hectare. This underscored the importance of studying the region's mustard production and marketing system. Tharad is Banaskantha's largest Taluka, accounting for most of the mustard output and cultivated area. Tharad alone accounted for 2.69 lakh tonnes of the 1.45 lakh hectares of mustard cultivation in Banaskantha. Tharad had the biggest share of mustard cultivation area (22.83%) during the 2021-2022 season, followed by Dhanera (20.71%), Palanpur (12.04%), Lakhani (10.49%), and Vav (7.90%). Tharad and Dhanera Talukas combined accounted for 43.54% of total mustard acreage and for 43.60% of production. Major problems included growing labor prices (49.39%), a scarcity of high-quality seeds (48.30%), limited access to loans (46.01%), and farmers' lack of awareness of contemporary technology and practices (39.33%).

Review of Literature

The private sector in Sri Lanka was primarily responsible for production and marketing, according to Gunatilke (2003). On the other hand, the state sector assisted farmers and improved their level of living. Without the assistance of the business sector, the market information system would not be able to function properly.

Staatz et al. (2011) found that investing in MIS has been a good idea in the past for three reasons: To begin, it is necessary to guarantee that all individuals in the food system possess an equivalent level of purchasing power. Because of this, the market will see a transformation from a monopsony or oligopoly to a framework that is more competitive. This is because farmers will have a greater understanding of the market. Improved pricing for farmers will result in increased production over time. Second, information about the market helps it work better and lets people make private choices in the short and long run. Better knowledge can help with geographical and temporal arbitrage of current production in the short term by making it easier to find new markets and lower the cost of searching. Over time, farmers, traders, processors, and consumers who make better decisions based on more information can improve the allocation of resources. This can be done by changing production and consumption to better meet the actual needs of consumers and the opportunity cost of the resources used to make those goods. Lastly, MIS is thought to be very important for setting public policy and giving information for running government programs.

Methodology

The 2020–21 study was conducted in the Banaskantha district. The multistage sampling technique was used to accomplish the goals of this investigation. Based on the maximum mustard area, Banaskantha district was purposefully chosen in the first step. Two talukas from the district were purposefully chosen in the following stages. Five villages were then chosen at random from each taluka. Lastly, twelve farmers who grew mustard were chosen at random from each chosen community.

A ranking technique developed by Garrett was utilized in order to examine the comments of the farmers concerning the limitations that were present in agricultural production and marketing. Through the use of this procedure, the rankings of advantages and disadvantages are converted into numerical scores. One of the most significant advantages of Garrett's ranking technique in comparison to a straightforward frequency distribution is that it enables limits to be prioritized according to the relevance that the respondents consider them to have.

The following is an example of how Garrett's formula can be used to convert ranks into percentages:

$$\text{Percent Position} = 100 * (R_{ij} - 0.5) / N_j$$

Where,

R_{ij} = Rank for j th responders as determined by the i th variable

N_j = is the number of variables that the j th respondents ranked.

Each rank's percentage position was translated into scores using Garrett and Woodworth's (1969) table as a guide. To get the total score for each factor, the total number of farmers whose scores were combined was divided by the sum of the scores for each individual farmer. A descending order of these mean scores for each factor was used to rank the limits, and this order was followed to sort the limitations.

Results and Discussion

To improve their efficiency and offer recommendations to policymakers, an effort has been undertaken in this section to identify the main obstacles that farmers have when producing and selling mustard. Here, the farmers' answers regarding the limitations of mustard production were arranged using Garrett's ranking

technique. Constraints were ranked in accordance with the descending order of the mean scores for every element influencing production and marketing. This method's main benefit over a basic frequency distribution is that the limitations are ranked according to how important they are to farmers.

Farmers that plant mustard face significant production constraints.

The main obstacles that farmers encounter when producing mustard are listed in Table 1. With a Garrett score of 55.17, ignorance and the high expense of plant protection measures (herbicides, insecticides, etc.) were ranked as the biggest barriers. The high cost of inputs for growing mustard (55.00), the scarcity of manures and fertilizers (54.83), and the high cost of production (52.22) came next. Insufficient funding (47.50), a shortage of manpower when needed and growing labor expenses (50.00), a lack of high-quality seed supply (49.17), and farmers' ignorance of contemporary technology and methods (43.34) were other noteworthy issues.

Table 1: Farmers who grow mustard suffer significant production constraints [n=120]

Sr. No	Production Constraints	Garrett's score	Rank
1	Lack of awareness of insecticide and pesticide and high price of insecticide and pesticide	58.34	1
2	High input cost for mustard cultivation	57.5	2
3	Shortage of fertilizer and manures	55.84	3
4	Higher production expenditure	54.17	4
5	Non availability of labour when needed and higher labour charge	50	5
6	Lack of availability of sufficient quality seed	49.17	6
7	Lack of availability of credit	47.5	7
8	Lack of awareness about new technology and Practices	43.34	8

Farmers who plant mustard face significant marketing constraints.

Table 2 lists the main obstacles to mustard marketing. According to Table 2's statistics, the biggest limitation was a lack of marketing knowledge (Garrett's score: 58.34), which was followed by greater labor and transportation costs (Garrett's score: 54.17). From the perspective of farmers, other significant limitations included increased middleman commissions (53.34), payment delays (51.67), a lack of transportation facilities (50), price fluctuations (49.17), and a lack of storage facilities (45.83).

Table 2: Farmers who cultivate mustard encounter significant marketing challenges. [n=120]

Sr. No	Marketing Constraints	Garrett's score	Rank
1	Insufficient marketing data	58.34	1
2	High labor and shipping costs	54.17	2
3	Higher commission fees for middlemen	53.34	3
4	Delayed payment	51.67	4
5	Lack of transportation facilities	50.00	5
6	Price Fluctuation	49.17	6
7	Lack of storage facilities	45.83	7

Suggestions on ways to boost mustard output:

The following advice can be offered to farmers to achieve the desired and successful level of production:

1. Make use of premium seeds.
2. Mustard cultivation should be carried out in accordance with scientific practices and methods.
3. Consuming an appropriate total amount of nutrients
4. Use integrated pest management (IPM) as your main plant protection strategy.
5. Make use of enhanced post-harvest technology.
6. Crop insurance incentives
7. Development of infrastructure with an equitable marketing system
8. Prompt planting, which allows for the use of effective weather forecasting
9. Credit options with low interest rates
10. Appropriate farm extension assistance

Conclusion

Lack of awareness and the high cost of pesticides and insecticides were the main obstacles farmers faced when growing mustard. These were followed by high input costs, a lack of manures and fertilizer, increased production costs, a lack of labor when it was needed and higher labor expenses, a lack of sufficient quality seed, a lack of credit, and a lack of understanding about new technologies and practices. All these factors contributed to an increase in production costs. Mustard growers faced several challenges in the realm of marketing, the most significant of which included a lack of information regarding marketing, expensive labor and

transportation expenses, increased commissions for middlemen, payment delays, a lack of transportation facilities, price swings, and a lack of storage facilities.

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