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Challenges encountered by mango cultivators to manage mango production

[1]Sujata J Parmar, [2]Dr. VJ Savaliya and [3]Khushbu Jadeja

[1, 3]PhD Scholar, Department of Agricultural Extension Education, CoA., JAU, Junagadh, Gujarat, India

[2]Training Associate, DEE, JAU, Junagadh, Gujarat, India

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Corresponding Author: Sujata J Parmar

Abstract

Mango (*Mangifera indica*) is one of the most nutritious and high-value fruit crops for nutritional security. The mango is also known as the "king of fruit." India is the world's second-largest producer of fruits and holds the first position in producing mangoes. As per the second advance estimate of the National Horticulture Board, mango is growing on 2258.13 thousand hectares and produces 21822.32 thousand MT in India. Mango is one of the well-known fruits for consumers, but it is a seasonal fruit farmer who gets income from it once a year. Keeping in mind study has been done to identify constraints farmers face in mango enterprise and suggestions to overcome. The research project was undertaken in the Saurashtra region of Gujarat. In the Saurashtra region, Junagadh and Gir Somnath have more coverage on the area & production of mango. This study was conducted by using an *Ex-post facto* research design. Out of these 11 districts, two districts namely Junagadh and Gir Somnath were purposively selected for the study because of the sound production of mango found in these districts. Three talukas were selected from each of the selected districts purposively because of the excellent mango production in these districts. A total of six talukas were chosen for the study. Four villages were selected from each taluka. Out of twenty-four villages, ten mango growers were selected to draw a sample size of two hundred and forty. Open-ended questionnaires are used to measure responses from mango farmers. For analysis, frequency and percentage are used to assign a rank. Major constraints faced by farmers, the majority (75.00%) of the respondents reported that “Fluctuation in market prices” was accorded the first rank, followed by “Crop production affected by climate and environment” and “Difficulty in storage due to perishable crop” was secured second (69.16%) and third rank (66.66%), respectively. Overcome constraints, the majority of respondents suggested “Strengthening information support through transfer of technology from the concerned department” secured a first rank with 73.33%, followed by “Providing market update by concern agricultural produce market committee” and “Organization of capacity building programmes for farmers for better agro-enterprise” was secured a second (70.00%) and third rank (66.66%), respectively. Addressing these challenges through targeted interventions can improve mango growers' entrepreneurial effectiveness, ultimately boosting the region's productivity and profitability.

Keywords: Mango, entrepreneurial effectiveness, production management

Introduction

Mango (*Mangifera indica*) is one of the most nutritious and high-value fruit crops for nutritional security. The mango is also known as the "king of fruit." It belongs to the family Anacardiaceae. India is the world's second-largest producer of fruits and holds the first position in producing mangoes. As per the second advance estimate of the National Horticulture Board, mango is growing on 2258.13 thousand hectares area and produces 21822.32 thousand MT in India. The mango share in Gujarat's total fruit production is 15.90 percent, a testament to its economic significance. Gujarat contributes a 06.70 percent share of the total output of Indian mango (Anon., 2018) [1]. Gujarat is renowned for its mango production in India, with mangoes holding a significant position among the various fruit crops grown in the state. The primary mango-producing states include Uttar Pradesh, Andhra Pradesh, Karnataka, Bihar and Odisha. Notably, Uttar Pradesh and Andhra Pradesh have high mango yields of 4807.83 t/ha and 4676.06 t/ha, respectively. In contrast, Gujarat mango production is 997.83 t/ha over 163.78 ha, which is comparatively lower than other states (Anon., 2024) [2].

The future advancement of the agricultural community hinges significantly on the entrepreneurial actions of farmers. Fruit crops have emerged as a promising avenue for entrepreneurial pursuits among farmers, offering higher yields and returns per unit area, optimizing resource utilization on farms, and presenting diverse opportunities for post-harvest processing and value addition (Chikkalaki, A. S. 2020) [3]. Mango is one of the well-known fruits for consumers, but it is a seasonal fruit farmer who gets income from it once a year. Keeping in mind study has been done to identify constraints farmers face in mango enterprise and suggestions to overcome.

Material and methods

Mango is one of the most important fruit crops of the Saurashtra region of Gujarat state. Mango cultivation area and production, particularly in Junagadh district, is 8700 ha and 39150 metric tonnes, respectively. On the other hand, in Gir Somnath district, 14301 ha. and 59654 MT production is found. The research project was undertaken in the Saurashtra region of Gujarat. The state of Gujarat was chosen purposively as it was ranked third in the country's

industrial profile and is the leading state in several agro-based industries like cotton, groundnut, coconuts, mango production, etc. As mango is the king of fruits, Kesar mango is especially famous in the Saurashtra region. In the Saurashtra region, Junagadh and Gir Somnath have more coverage on the area & production of mango. This study was conducted by using an Ex-post facto research design. It is a systematic empirical inquiry in which the scientist does not have direct control over the independent variables because their manifestations have already occurred or are inherently not manipulated. Gujarat consists of 33 districts, out of which 11 are in the Saurashtra region. Out of these 11 districts, two districts namely Junagadh and Gir Somnath were purposively selected for the study because of the sound production of mango found in these districts. Three talukas were selected from each of the selected districts purposively because of the excellent mango production in these districts. A total of six talukas were chosen for the study. Four villages were selected from each taluka. Out of twenty-four villages, ten mango growers were selected to draw a sample size of two hundred and forty. Open-ended questionnaires are used to measure responses from mango farmers. For analysis, frequency and percentage are used to assign a rank.

Results and Discussion

Constraints refer to a situation or circumstance which impedes, restricts, or limits the activity or performance of an individual. In this study, it was operationalized as items of difficulties experienced by the respondents in entrepreneurial effectiveness. Based on the responses from farmers, the frequency was calculated for each constraint and converted to a percentage and accordingly, rank was given. The information regarding the constraints is depicted in Table 1.

Table 1: Constraints faced by mango growers in managing mango enterprise (n=240)

Sr. No.	Constraints	Frequency	Percentage	Rank
1.	Difficulty in securing credit	118	49.16	VI
2.	Fluctuation in market prices	180	75.00	I
3.	High input costs	108	45.00	VII
4.	Lack of technical guidance	150	62.50	IV
5.	Labour shortage and high wage rate	40	16.66	XI
6.	Exploitation by middleman	30	12.50	XII
7.	Seasonality of demand for produced	96	40.00	VIII
8.	Lack of adequate training facilities regarding entrepreneurship	126	52.50	V
9.	Lack of processing technique	80	33.32	IX
10.	Pest and disease incidence	70	29.16	X
11.	Crop production affected by climate and environment	166	69.16	II
12.	Difficulty in storage due to perishable crop	160	66.66	III

It is evident from the data presented in Table 1 majority (75.00%) of the respondents reported that “Fluctuation in market prices” was accorded the first rank, followed by “Crop production affected by climate and environment” and “Difficulty in storage due to perishable crop” was secured second (69.16%) and third rank (66.66%), respectively. Other hand, “Lack of technical guidance” secured fourth rank (62.50%), followed by “Lack of adequate training facilities regarding entrepreneurship,” and “Difficulty in securing credit” secured fifth (52.50%), sixth (49.16 percent) ranks, respectively. High input costs” was accorded seventh rank (45.00%) followed by “Seasonality of demand for produced” with eighth (40.00%) “Lack of processing technique” with ninth rank (33.32%), “Pest and disease incidence” with tenth rank (29.16%), “Labour shortage and high wage rate” with eleventh rank (16.66 percent) and “Exploitation by middleman” with a twelfth ranked with 12.50%, respectively. The results align with the findings of Manjunath (2015) [4] and Patel (2023) [5].

It is important to overcome constraints and seek suggestions from the respondents to improve entrepreneurial effectiveness. It gave value to the technical knowledge of the respondents and their understanding of entrepreneurship. For this, suggestions were invited openly from the respondents. Most respondents gave similar suggestions, so the frequency for each suggestion was calculated and converted into percentages, and rank was given accordingly. The information is presented in Table 2.

Table 2: Suggestions from farmers to overcome constraints faced by mango growers (n=240)

Sr. No.	Suggestions	Frequency	Percentage	Rank
1.	Credit process should be easily assessable for farmers	155	64.58	IV
2.	Capacity building programmes should be organised for farmers for better agro-enterprise.	160	66.66	III
3.	More skilled personnel should be trained to make available the financially affordable personnel for farmers	117	48.75	IX
4.	Training on value added product should be given	120	50.00	VIII
5.	Market update by concern agricultural produce market committee	168	70.00	II
6.	Subsidies and financial support should be provided	128	53.33	VII
7.	Input price should be minimized	136	56.66	VI
8.	Strengthening information support through transfer of technology from the concerned department	176	73.33	I
9.	Creation of adoption among the producers about the advantages and standardization of mango production technology	105	43.75	X
10.	Standardized price for the produce	147	61.25	V

It is reflected from Table 5.40 that majority of respondents suggested "Strengthening information support through transfer of technology from the concerned department" was secured a first rank with 73.33% followed by "Providing market update by concern agricultural produce market committee" and "Organization of capacity building programmes for farmers for better agro-enterprise" was secured a second (70.00%) and third rank (66.66%), respectively. While 64.58% of respondents suggest "Ensuring the accessible credit process for farmers" was secured fourth rank followed by "Standardized price for the produce" and "Input price should be minimised" secured fifth (61.25%) and sixth ranks (56.66%), respectively. A few numbers of respondents suggested that "Subsidies and financial support should be provided" was secured seventh rank (53.33%) followed by "Training on value-added product should be given" and "More skilled personnel should be trained to make available the financially affordable personnel for farmers" was secured an eighth rank (50.00%) and ninth rank (48.75%), respectively. "Creation of adoption among the producers about the advantages and standardization of mango production technology" was secured a tenth suggested by 43.75% of respondents. The results align with the findings of Manjunath (2015) [4] and Patel (2023) [5].

Conclusion

The study highlights the various challenges mango growers encounter in managing mango production effectively. It was found that market fluctuations, climate change, and storage difficulties were the most significant constraints, with 75% of respondents reporting market price fluctuations as the biggest challenge. Other notable issues include a lack of technical guidance, inadequate training facilities, and high input costs. On the other hand, the study also revealed potential solutions proposed by farmers, with the majority emphasizing the need for strengthened information support, market updates, and capacity-building programs. Providing easier access to credit, standardized pricing, and subsidies were also suggested as critical measures to improve entrepreneurial effectiveness. Addressing these constraints and implementing the suggested measures could significantly enhance mango production management and profitability, contributing to the overall development of the mango industry in Gujarat and beyond.

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