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Constraints in production, marketing and processing of mango (*Mangifera indica* L.) in Yamunanagar district of Haryana

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Abstract

The Mango, *Mangifera indica* L, which belongs to the family of Anacardiaceae, is one of the most important tropical and subtropical fruits of the world and is popular both in fresh and processed forms. It is called as the king of fruits on account of its nutritive value, taste, attractive fragrance and health promoting qualities.The present study has been designed to investigate cost of production, and returns per hectare of mango fruit. The Radaur block of Yamunanagar district was selected for sampling and a total of thirty mango farmers from various villages in this block were selected randomly. The primary data for the agriculture year 2017-18 were collected by personal interviews of the selected farmers with the help of specially designed schedule. An attempt was made to analyze the constraints responsible for lower yield on the farmers' orchard. The results of the study was indicated that86.67 per cent of the respondents had lack of knowledge of recommended fertilizer doses, high cost of pesticides (86.67%) and high cost of fertilizer (83.33%), high cost of seed (76.67%), high cost of transportation (80.00%), too much fluctuation in prices (80.00%), existence of large number of intermediaries in marketing process (76.67%), heavy losses in the market (70.00%), inadequate of appropriate credit facilities (70.00%), fluctuation in raw material and procurement (76.67%), problems in the arrangement of finance (73.33%), shortage of electricity power for processing (70.00%), lack of technical manpower (70.00%), lack of good quality packaging material (63.33%) and lack of processing unit (56.67%).

Keywords: Mango production, marketing constraints, processing challenges

Introduction

The Mango, *Mangifera indica* L, which belongs to the family of Anacardiaceae, is one of the most important tropical and subtropical fruits of the world and is popular both in fresh and processed forms. It is called as the king of fruits on account of its nutritive value, taste, attractive fragrance and health promoting qualities. Mangoes are a popular, nutritional tropical fruit, which are now one of the most important fruits crops in tropical and subtropical areas of the world. They originated in India, were they have been cultivated for more than 4000 years. Beginning in the16th Century, mangoes were gradually distributed from India to other tropical countries in Asia such as the Philippines, Indonesia, China and Thailand. They were also spread to the Americas in the 18th Century, and from western Mexico they were carried to Hawaii in the early 19th century. The first recorded introduction to Florida was at Cape Sable in 1833. Mango was introduced to Egypt in the 18th Century from Ceylon by the Egyptian leader Ahmed Orabi upon his release from internment. Many cultivars grown in Egypt today, such as 'Zibdia' and 'Hindi Be-Sennara' date form this time (Ibrahim and Khalif, 1999) [3].

Fruit cultivation is a profitable enterprise but it requires heavy initial investment and management. Therefore, to know the economic feasibility of fruits cultivation, it becomes essential to work out the initial cost in establishing a fruits orchard, mechanism of financing such long term investments, average cost of production and return, the amortizing capacity of such orchard and profitability of fruits cultivation.

In Haryana, area under fruit crops in 2023-24 was 70218.92 and hectares and production was 856320.66 metric tonnes with productivity of 12.22 MT/ha (Anonymous, 2024). The area, production and productivity of mango in Haryana were 7803.95 hectare, 98338 MT and 12.60 tonnes per hectare respectively during the year 2023-24. In Haryana, it is grown mainly in the districts like Kurukshtera, Yamunanagar, Karnal, Sonipat, Ambala, Panchkula, Nuh, Panipat, (Horticulture Department, Government of Haryana, 2023-24).

The potential for agro processing can be viewed from the level of transformation process of primary material and by products under the commodity system. The degree of transformation of various raw materials varies from cleaning and grading of agricultural produce (vegetables, fruits, eggs etc.) to milling, ginning, cooking, dehydration, freezing, mixing and chemical alteration to make ready to eat foods. In addition, the food processing industries generate demand on the farm sector for more and diversified agricultural output. The raw material processed by food processing

industries is often perishable and requires immediate handling, storage and processing. Food processing industries also have a large export potential. In fact, today processed and packed fruit and vegetables have a very favorable chance being universally accepted.

Materials and Methods

Multistage stratified sampling technique was adopted to select the ultimate unit of sample. Out of twenty two districts of Haryana state Yamunanagar district was selected, on the basis of highest production(98338 MT), which accounted about 73.26 per cent of total mango production in the state during 2023-24. A sample of thirty mango farmers was taken purposively from various villages in Radaur block of Yamunanagardistrict of Haryana. Primary data pertaining to the year 2017-18 were collected from selected respondents by conducting personal interviews with help of specifically designed schedule.

The information about the problems faced by the mango farmers were ascertained from the selected respondents as well as from selected intermediaries on various aspects of mango marketing. The information regarding problem faced by the producer in production and processing of mango were also collected from the selected respondents.

Results and Discussion

The farming is gradually becoming more commercialized with passage of time and improvement in crop production technology. Now, it aims at increasing productivity of land and other scarce farm resources. In this process, the problems faced by farming community regarding agricultural enterprises have attained a paramount significance. In agricultural sector of India, a farmer has to face number of problems in production and marketing of fruits. The selected farmers were contacted through opinion survey for analyzing the problems in production, marketing as well as in the processing of fruits in the study area.

Constraints in production of mango

An attempt was made to analyze the constraints responsible for lower yield on the farmers' orchard. The major problems faced by the farmers' in the production of mango are presented in Table 1 it indicates that 86.67 per cent of the respondents had lack of knowledge of recommended fertilizer doses, high cost of pesticides (86.67%) and high cost of fertilizer (83.33%). These were followed by difficulty in identifying the pests and diseases (80.00%), high cost of seed (76.67%), lack of knowledge combating pests and diseases (76.67%), labour problem during harvesting (73.33%) and lack of knowledge about seed/seedling treatment (66.67%), lack of the knowledge about improved varieties their seed/planting materials (56.67%), time consuming and labour intensive manual weeding (53.33%) and labour problem for weeding (46.67%). These findings corroborated those of Jawale and Ghulghule (2015) [4] who found that effect of heavy rains, winds and hail stone during with flowering and fruit setting time, problem of scarcity of labour with high wage rate, irregular electricity supply were formed the crux of the cultivation problems of growers.

Table 1: Production constraints expressed by mango growers

Sr. No.	Constraints	Respondents (N=30)	
		Frequency	Percentage
1.	Lack of knowledge of recommended fertilizer doses	26	86.67
2.	High cost of pesticides	26	86.67
3.	High cost of fertilizer	25	83.33
4.	Difficulty in identifying the pests and diseases	24	80.00
5.	High cost of seed	23	76.67
6.	Lack of knowledge about the control measures for various pests and diseases	23	76.67
7.	Labour problem during harvesting	22	73.33
8.	Lack of knowledge about seed/seedling treatment	20	66.67
9.	Lack of the knowledge about improved varieties, their seed/planting materials	17	56.67
10.	Manual weeding is time consuming and labour intensive	16	53.33
11.	Labour problem for weeding	14	46.67
12.	Poor quality of seed	7	23.33
13.	Lack of knowledge about improved method of harvesting	7	23.33
14.	Inadequate irrigation facilities	5	16.67
15.	Non availability of seed and planting materials in time	4	13.33
16.	Non availability of fertilizer in time	4	13.33
17.	Water shortage in summer	3	10.00
18.	Lack of knowledge about grading	3	10.00

Marketing problems expressed by mango growers

It is predicated from Table 2 that 90 per cent of the respondents experienced absence of minimum support prices, high cost of transportation (80.00%), too much fluctuation in prices (80.00%), existence of large number of intermediaries in marketing process (76.67%), heavy losses in the market (70.00%), inadequate of appropriate credit facilities (70.00%), lengthy procedure for getting credit from government institutions for marketing purpose (66.67%),lack of suitable packaging material (63.33%), lack of market information (53.33%) and long distance from the production point to market (46.67%) were the major problems in marketing of mango. Similar constraints were also found by Kumar *et al.* (2019) [5] and Kumari (2017) [6] in their respective studies.

Table 2: Marketing problems expressed by mango growers

Sr. No.	Problems	Respondents (N=30)	
		Frequency	Percentage
1.	Absence of minimum support prices	27	90.00
2.	High cost of transportation	24	80.00
3.	Too much fluctuation in prices	24	80.00
4.	Existence of large number of intermediaries in marketing process	23	76.67
5.	Heavy losses in the market	21	70.00
6.	Inadequate of appropriate credit facilities	21	70.00
7.	Lengthy procedure for getting credit from government institutions for marketing purpose	20	66.67
8.	Lack of suitable packaging material	19	63.33
9.	Lack of market information	16	53.33
10.	Long distance from the production point to market	14	46.67
11.	Lack of infrastructure facility	12	40.00
12.	Unorganized marketing system	9	30.00
13.	Commission agents not maintaining the proper records of sale and rate	8	26.67
14.	Open auction sale fetches low price for produce	6	20.00

Processing problems expressed by mango growers

Data in Table 3clearly show that 80.00 per cent of the respondents experienced higher rate of charges of power and fuels, fluctuation in raw material and procurement (76.67%), problems in the arrangement of finance (73.33%), shortage of electricity power for processing (70.00%), lack of technical manpower (70.00%), lack of good quality packaging material (63.33%), lack of processing unit (56.67%), constraints regarding location of site (56.67%), lack of suitable variety for processing (53.33%), constraints in marketing of processed product (50.00%) and problems in repair and maintenance of processing machinery (26.67%). Similar constraints were also found by Malaisamy *et al.* (2007) [7], Nandal and Punia (2003) [8] and Setu *et al*. (2018) [9] in their respective studies.

Table 3: Processing problems expressed by mango growers

Sr. No.	Problems	Respondents (N=30)	
		Frequency	Percentage
1.	Higher rate of charges power and fuels	24	80.00
2.	Fluctuation in raw material and procurement	23	76.67
3.	Problems in the arrangement of finance	22	73.33
4.	Shortage of electricity power for processing	21	70.00
5.	Lack of technical manpower	21	70.00
6.	Lack of good quality packaging material	19	63.33
7.	Lack of processing unit	17	56.67
8.	Constraints regarding location of site	17	56.67
9.	Lack of suitable variety for processing	16	53.33
10.	Constraints in marketing of processed product	15	50.00
11.	Problems in repair and maintenance of processing machinery	8	26.67

Conclusion

The Mango, *Mangifera indica* L, which belongs to the family of Anacardiaceae, is one of the most important tropical and subtropical fruits of the world and is popular both in fresh and processed forms. It is called as the king of fruits on account of its nutritive value, taste, attractive fragrance and health promoting qualities.The major problems faced by the farmers' in the production, marketing and processing of mango were lack of knowledge of recommended fertilizer doses, high cost of pesticides and high cost of fertilizer, lack of knowledge combating pests and diseases, labour problem during harvesting, absence of minimum support prices, high cost of transportation ,too much fluctuation in prices, existence of large number of intermediaries in marketing process, heavy losses in the market, inadequate of appropriate credit facilities, lengthy procedure for getting credit from government institutions for marketing purpose, lack of suitable packaging material, shortage of electricity power for processing, lack of technical manpower , lack of good quality packaging material, lack of processing unit, constraints in marketing of processed product and problems in repair and maintenance of processing machinery.

References

1. Anonymous. Indian horticulture database. Gurugram: National Horticulture Board, Ministry of Agriculture and Farmer's Welfare, Government of India; 2024. http://www.nhb.gov.in
2. Anonymous. Ministry of Agriculture and Farmer's Welfare, Government of India; 2024. Available from: https://www.indiastat.com
3. Ibrahim AM, Khalif MN. Mangoes: Cultivation, Caring and Production. 1st ed. Ede: Ibrahim AM; 1999.
4. Jawale SV, Ghulghule JN. Constraints and suggestions of Kesar mango production in export zone of Marathwada region. Int J Commer Bus Manag. 2015;4(5):713-21.
5. Kumar N, Malik DP, Kumar R, Sumit. An economic analysis of mango (*Mangifera indica* L.) cultivation in Haryana. Indian J Econ Dev. 2019;15(2):282-8.
6. Kumari M. Estimation of demand supply gap and major

constraints in production and marketing of major fruits and vegetables in Bihar, India. Int J Curr Microbiol Appl Sci. 2017;6(6):2662-72.
7. Malaisamy A, Chandrasekaran M, Parimalarangan R. An economic analysis of supply management efficiency of mango in Tamil Nadu, India. Indian J Agric Mark. 2007;21(3):125-33.
8. Nandal RS, Punia D. A study on economics of major vegetable and fruit crop in Haryana state. Hisar: Department of Agricultural Economics, CCS HAU; 2003. Research Bulletin No.: 50.
9. Setu R, John SA, John R. Constraints faced by the farmers in production and marketing of guava in Allahabad district of Uttar Pradesh. Int J Agric Sci. 2018;10(6):5608-10.