

Constraints faced by Farmers in Adoption of Improved Cultivation practices of Tomato

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Abstract

The present paper is based on a study conducted in Matar taluka of Kheda district. The objectives are to study the profile of tomato growers and constraints faced by farmers in adoption of improved cultivation practices of tomato. The constraints were divided into five sub components related to input, financial constraints, marketing, technical and general constraints. After interviewing 100 farmers of ten randomly selected villages, it was revealed that the major constraint related to inputs was unavailability of improved varieties. In case of constraints related to financial aspects it was minimum support price not being declared before sowing season, while in case of marketing, major constraint was unavailability of credit at marginal interest. The major technical constraint was lack of knowledge about export quality produce and among general constraints the major constraint was requirement of more labour.

Introduction

Tomato (*Lycopersicon esculentum*) is a popular vegetable all over India. It has good nutritional value and contains vitamin A, B, C and calcium, iron etc. Its vitamin C content is 31 mg per 100 g of tomato. It contains a number of nutritive elements almost double as compared to apple and superior with regard to food values. It is consumed as a raw salad, cooked or as a processed food item such as sauce, ketchup, jam, jelly, pickles, soup etc. Tomato originated in Peruvian and Mexican regions and came from tropical America and spread to other parts of the world in 16th century. It was perhaps introduced into the Indian subcontinent by the Portuguese (Das, 1993). Due to its palatability and vitamin content its demand in general has been increasing day by day, while its production is far from the requirement.

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The major factors of low productivity of tomato may be attributed to the non-availability of disease free seed of high yielding varieties, poor agronomic practices, indigenous weeding methods, lack of proper plant protection measures for the control of insect/pests and diseases, defective marketing system and lack of information. It is assumed that modern technology is available at technology producing centers but not effectively transferred to the ultimate users. Hence there should be emphasis on modern agricultural techniques which is possible through dissemination of agricultural information among the farmers. It is also important to note that simply provision of information is not sufficient; it is also desirable that farmers adopt the most recent varieties of tomato and other farming techniques. This study was taken up to examine constraints faced by farmers in adoption of improved cultivation practices of tomato.

Methodology

The present study was conducted in Matar taluka of Kheda district. Ten villages (Nandoli, Khandhali, Dethali, Heranj, Alindra, Limbasi, Machhiyel, Traj, Tranja and Khadiyarapura) were selected randomly. From each village 10 Tomato growers were selected randomly. Thus, a total 100 Tomato growers were selected for the study. Appropriate statistical procedures like frequency distribution and percentage were used for the analysis of the data and overall ranking of constraints was completed with the help of MPS (Mean Per cent Score).

Results and Discussion

Distribution of Farmers according to characteristics

An effort was made to study some selected characteristics of the tomato growers. Some characteristics like age, education, occupation, size of land holding and possession of animals were studied and are presented in Table 1.

Table 1. Distribution of Farmers according to characteristics n=100

Sl. No.	Category	Frequency	Per cent
1	Age		
	Young (Up to 30 years)	49	49.00
	Middle age (31 to 55 years)	33	33.00
	Old age (above 55 years)	18	18.00
2	Education		
	Illiterate	30	30.00
	Primary level	42	42.00
	High school and Higher Secondary	24	24.00
	Above Higher Secondary	04	04.00

3	Occupation		
	Farming	06	06.00
	Farming + Animal Husbandry	94	94.00
	Farming + service	00	00.00
4	Size of land holding		
	Up to 1 ha.	47	47.00
	1.1 to 2 ha.	28	28.00
	2.1 to 4 ha.	19	19.00
	Above 4 ha.	05	05.00
5	Animal possession		
	No animal	08	08.00
	Up to 2 animals	41	41.00
	3 to 5 animals	32	32.00
	Above 5 animals	24	24.00

From Table 1 we can observe that nearly half (49.00 per cent) of the Tomato growers belonged to young age group, 42.00 per cent had education up to primary level, while a great majority (92.00 per cent) of the tomato growers were involved in farming and animal husbandry as their main occupation, 47.00 per cent of the tomato growers had up to 1 ha. of land and 41.00 per cent of them had up to two animals.

Constraints faced by tomato growers in adoption of improved cultivation practices of Tomato

An effort has been made to identify the constraints perceived by the tomato growers. The constraints were divided into five sub components.

Table 2. Overall constraints perceived by the Tomato growers in adoption of improved cultivation practices of tomato n=100

Sl. No	Constraints	Total	
		MPS	Rank
1	Input Constraints	57.33	V
2	Financial Constraints	74.60	II
3	Marketing Constraints	80.25	I
4	Technical Constraints	70.20	III
5	General Constraints	59.00	IV

As may be seen in Table 2, among the constraints perceived by the tomato growers in adoption of improved cultivation practices of tomato, marketing constraint (80.25 per cent) ranks 1st followed by financial (74.60 per cent),

technical (70.20 per cent), general (59.00 per cent) and input constraints (57.33 per cent) ranking 2nd, 3rd, 4th and 5th, respectively.

Table 3. Constraints related to Inputs

n=100

Sl. No.	Constraints	Frequency	Percentage	Rank
1	Unavailability of improved varieties	69	69.00	I
2	More requirement of fertilizers and manures	64	64.00	II
3	Unavailability of recommended chemicals	58	58.00	III
4	Unavailability of inputs in time	53	53.00	IV
5	Lack of irrigation water	47	47.00	V
6	Unavailability of labour	53	53.00	IV

From table 3 it can be seen that constraints related to inputs were unavailability of improved varieties (69.00 per cent) which ranks 1st followed by more requirement of fertilizers and manures (64.00 per cent) at 2nd, unavailability of recommended chemicals (58.00 per cent) ranking 3rd, unavailability of inputs in time (53.00 per cent) and unavailability of labour (53.00 per cent) at 4th rank and lack of irrigation water (47.00 per cent) ranking 5th.

The data presented in Table 4 reveals that constraints related to finance were MSP is not declared before sowing season (100.00 per cent) ranking 1st followed by lack of proper marketing facilities (72.00 per cent), malpractices of merchants in the mandies (71.00 per cent) ranking 2nd and 3rd respectively. High fluctuation in market prices and lack of export marketing in the area jointly rank 4th with 65.00 per cent.

Table 4. Financial Constraints

n=100

Sl. No.	Constraints	Frequency	Percentage	Rank
1	Lack of proper marketing facilities	72	72.00	II
2	Malpractices of merchants in the mandies	71	71.00	III
3	High fluctuation in market prices	65	65.00	IV
4	MSP is not declared before sowing season	100	100.00	I
5	Lack of export marketing in the area	65	65.00	IV

Constraints related to marketing (Table 5) were lack of financial agencies and unavailability of credit at marginal interest (100.00 per cent) ranking 1st followed by high cost of inputs (67.00 per cent) and high charges of electricity (54.00 per cent) ranking 2nd and 3rd, respectively.

Table 5. Marketing Constraints

n=100

Sl. No.	Constraints	Frequency	Percentage	Rank
1	High cost of inputs	67	67.00	II
2	High charges of electricity	54	54.00	III
3	Lack of financial agencies	100	100.00	I
4	Unavailability of credit on marginal interest	100	100.00	I

From the data presented in table 6 it is revealed that in case of technical constraints lack of knowledge about export quality produce (78.00 per cent) ranks 1st, lack of knowledge and skill about weed management (72.00 per cent) rank 2nd, while lack of need based training (68.00 per cent) and lack of knowledge about nursery raising (68.00 per cent) jointly rank 3rd and lack of skill for seed and soil treatment (65.00 per cent) ranks 4th.

Table 6. Technical Constraints

n=100

Sl. No.	Constraints	Frequency	Percentage	Rank
1	Lack of knowledge about nursery raising	68	68.00	III
2	Lack of skill for seed and soil treatment	65	65.00	IV
3	Lack of need based training	68	68.00	III
4	Lack of knowledge and skill about weed management	72	72.00	II
5	Lack of knowledge about export quality produce	78	78.00	I

Table 7. General Constraints

n=100

Sl. No.	Constraints	Frequency	Percentage	Rank
1	High temperature during nursery period	52	52.00	V
2	Timely availability of electricity	60	60.00	II
3	Unavailability of suitable equipment for weeding	55	55.00	IV
4	Cloudy weather at the time of flowering	57	57.00	III
5	More labour requirement	71	71.00	I

Table 7 shows that among general constraints, more labour requirement (71.00 per cent) ranks 1st followed by timely availability of electricity (60.00 per cent), Cloudy weather at the time of flowering stage (57.00 per cent), unavailability of suitable equipment for weeding (55.00 per cent) and high temperature during nursery period (52.00 per cent) rank 2nd, 3rd, 4th, and 5th, respectively.

Conclusion

On the whole, it can be concluded that the major constraint related to inputs was unavailability of improved varieties, in case of constraints related to financial aspects, it was minimum support price not declared before sowing season, while in case of marketing, the major constraint was unavailability of credit on marginal interest. In case of technical constraints, major constraint was lack of knowledge about export quality produce and in case of general constraints major constraint was labour requirement. It is recommended that the farmers of the study area may be provided adequate sources for the improved variety and government must announce minimum support price of the particular commodity before the sowing. The credit facilities in the area need to be strengthened. Subsequently there is need to create adequate awareness regarding the export quality of the product to fetch a higher price for the commodity. Likewise the State Agricultural University (SAU) must also develop scientific and improved package of practices of tomato crop so as to lower the labour requirements and labour cost to reduce cost of production as a whole.

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