



Society of Extension Education Gujarat

Published: Gujarat Journal of Extension Education (ISSN 2322-0678)

NAAS Rating : 5.30 (Effective from 1st Jan 2024)

ADOPTION OF RECOMMENDED PRODUCTION TECHNOLOGY BY TOMATO GROWERS IN NASHIK DISTRICT OF MAHARASHTRA

Parmeshwari B. Pawar¹, S. M. Hadole² and T. B. Ugale³

1 & 3 Assistant Professor, Department of Extension Education, K. K. Wagh College of Agriculture, Saraswatinagar, Panchavati, Nashik- 422 003 (Maharashtra)
2 I/c, Principal, K. K. Wagh College of Agriculture, Saraswatinagar, Panchavati, Nashik- 422 003
Email : pb.pawar@kkwagh.edu.in

ABSTRACT

The present study entitled extent of adoption of recommended production technology by tomato growers was carried out in Nashik district of Maharashtra state. The study revealed that majority of the farmers were having medium to high level of knowledge about package of practices for tomato cultivation and majority of the tomato growers belonged to medium level of adoption. The extent of adoption of plant protection measures was ranked first followed by the adoption of selection of variety, land preparation and transplanting and manure, fertilizer and irrigation management were ranked second and third, respectively. The extent of adoption of the recommended tomato production technology like nursery management and harvesting and marketing were ranked fourth and fifth respectively. So as to enhance adoption in certain important practices like nursery management and harvesting and marketing, it is necessary to involve the farmers in extension education programme. It would facilitate the dissemination of recent technologies.

Keywords: adoption, recommended production technology, tomato growers

INTRODUCTION

Among vegetables tomato (*Lycopersicon esculantum* Mill.) occupies prominent position in India. Tomato is most valuable crop and commercially grown as vegetable in India. Red colour of tomato is very attractive so it is considered as an important commodity of international market especially for its natural colour.

Maharashtra contributes to about 4% of the total production of Tomato in the country. The state produces about 0.74 m MT of tomato from 0.05 m. ha. having productivity of 14.2 MT/ha which is the third highest in the country. The major tomato growing belts in the state are Nashik, Ahmednagar, Pune and Nagpur. 8.37 lakh MT of tomato have been traded in organized markets with average price of ₹ 7.31/kg. (Anon. 2013)

Tomato is a vegetable of considerable popularity. Next to onion, tomato is widely grown in the district. The total area it occupied was 28,838.46 hectares in 2012. It is mainly grown in Dindori, Niphad, Nashik and Sinnar tahsils.

Therefore, raising the efficiency among the growers is an essential element for getting desired profit from the tomato cultivation. Understanding that, very few studies on this

aspect have been conducted in this area and therefore, it was felt necessary to take study on adoption of recommended production technology of tomato by tomato growers. Keeping in view, the present investigation was undertaken with specific objective to study the extent of adoption of recommended production technology of tomato.

OBJECTIVE

To know the adoption of recommended production technology by tomato growers in Nashik district of Maharashtra

METHODOLOGY

Nashik district was chosen by researcher for the study. Dindori and Niphad tahsils of Nashik district were purposively selected because these tahsils have more tomato growing area as compared to other tahsils of the district. Ten villages having more area under tomato crop from those two tahsils. For this study seventy tomato growers were selected with simple random sampling technique and all seventy tomato growers considered as a sample and as respondents. The data was collected with the help of well-structured and pre-tested questionnaires through personal contact and were compiled, tabulated and analysed to get proper answers for

objectives of the study.

To measure the extent of knowledge and adoption on the three point continuum, the scales already developed and in-use in the extension research studies. The package of practices for tomato crop as recommended by MPKV, Rahuri was adopted as a base for extent of adoption. The adoption

quotient was calculated with the help of following formula.

$$\text{Adoption quotient (A.Q)} = \frac{\text{Actual adoption of practices}}{\text{Recommended practices}} \times 100$$

The statistical tools used were percentage, mean score, standard deviation and ranking.

RESULTS AND DISCUSSION

Knowledge of farmers about improved technologies in cultivation of tomato crops

Table 1 : Knowledge of farmers about improved technologies in cultivation of tomato crops (n=70)

Sr. No.	Knowledge Level	Number	Per cent
1	Low (less than 60 score)	11	15.71
2	Medium (between 60 to 85 score)	46	65.71
3	High (greater than 85)	13	18.57

Overall knowledge of farmers about package of practices for tomato cultivation: According to Table 1, the result showed that majority (65.71 percent) of the farmers were having medium level of knowledge about package of practices for tomato cultivation, while 18.57 and 15.71 per cent farmers fall in high and low knowledge level category, respectively.

These findings are close conformity with P. K. Singh, K.K. Barman and Jay G. Varshney (2011) concluded that majority of the farmers were having medium to high level of knowledge about package of practices for tomato cultivation, Sandeep Yadav, R. R. Prajapati and M.R.Prajapati (2014) reveled that majority (68.83 per cent) of the respondents were having medium level of knowledge. Whereas, 19.66 and 15.00 percent of the respondents were found having low and high level of knowledge, respectively, Sushil Kumar Varma, D. P. Rai and Lekh Ram Verma (2015) concluded

that the maximum respondents had medium level of overall knowledge about chill production.

Adoption of farmers about improved technologies in cultivation of tomato crop

The “adoption process” is the mental process through which an individual passes from first hearing of an innovation to its final adoption, while adoption is a decision to continue the full use of an innovation. Generally, the farmers do not adopt package of practices fully. There is only a partial adoption by them. As a result, the gap always appears between the recommended production technology and their use at farmer’s field. With a view to find out the extent of adoption of recommended practices of tomato cultivation, the tomato growers were asked to give information about package of practices adopted by them. The data regarding extent of adoption are given in Table 2 and 3.

Table 2: Distribution of tomato growers according to their practice wise adoption of recommended package of practices for the tomato crop (n=70)

Sr. No.	Practices	Adoption level			Total score	Mean score	Rank
		Low	Medium	High			
1	Nursery management	20 (28.57)	40 (57.14)	10 (14.28)	130	1.85	IV
2	Selection of variety, land preparation and transplanting	22 (31.42)	27 (38.57)	21 (30.00)	139	1.98	II
3	Manure, fertilizer and irrigation management	21 (30.00)	31 (44.28)	18 (25.71)	137	1.95	III
4	Plant protection measures	06 (08.57)	50 (71.42)	14 (20.00)	149	2.12	I
5	Harvesting and marketing	28 (40.00)	27 (38.57)	15 (21.42)	126	1.80	V

Table 3: Adoption of recommended package of practices for the tomato crop by tomato growers (n=70)

Sr.No.	Adoption Level	Number	Per cent
1	Low (less than 45 score)	08	11.43
2	Medium (between 45 to 74 score)	47	67.14
3	High (above 74)	15	21.43

The data presented in Table 2 that more than half (57.14) per cent of the tomato growers had medium level of adoption followed by 28.57 per cent of the tomato growers had low and rest 14.28 per cent of the tomato growers had high level of adoption with respect to nursery managements. In case of selection of variety, land preparation and transplanting 38.57 per cent of the tomato growers fall under medium level of adoption followed by low and high with 31.42 and 30.00 per cent respectively. About 44.28 per cent of the tomato growers had medium level of adoption followed by low and high with 30.00 and 25.71 per cent, respectively for manure, fertilizers and irrigation management. Majority (71.42 per cent) had medium level of adoption while 20.00 and 08.57 had high and low adoption level, respectively about plant protection measures. Whereas 40.00 per cent of the tomato growers fall under low level of adoption followed by 38.57 and 21.42 per cent with medium and high, respectively for harvesting and marketing.

Out of five selected practices, the extent of adoption of plant protection measures was (02.12 mean score) was higher than the other adopted practices of tomato and it was ranked first followed by the adoption of selection of variety, land preparation and transplanting (01.98 mean score) and manure, fertilizer and irrigation management (1.95 mean score) were ranked second and third, respectively. The extent of adoption of the recommended tomato production technology like nursery management (01.80 mean score) and harvesting and marketing (01.80) mean score) were ranked fourth and fifth respectively.

These findings are in the agreement with the findings of P. K. Singh, K.K. Barman and Jay G. Varshney (2011) concluded that a majority of the tomato cultivators were medium adopters of practices like suitable soil preparation, seed rate, fertilizer application, weed control, plant protection measures and disposal of produce, Surendra Kumar, Hanuman Lal and Hanuman Sahay Bunkar (2014) who shows that majority of coriander grower’s good adoption about recommended coriander production technology like field preparation, time of sowing and harvesting, threshing and storage. While minimum adoption was possessed in Seed treatment and high yielding varieties, Sushil Kumar Varma, D. P. Rai and Lekh Ram Verma (2015) concluded that the practice wise extent of adoption is concerned, 32.50 per cent of the chill grower had high level of adoption regarding

recommended field preparation followed by irrigation management and weed management practices.

As it is apparent from the data in Table 3, the tomato growers of about 67.14 per cent of farmers were found to be in medium adoption, while 21.43 per cent farmers were in high adoption and only 11.43 per cent of farmers were in low adoption level respectively.

These finding confirm the findings of Ahmad N. Al-Shadiadeh, Fadhil M. AL-Mohammady and Taleb R. Abu-Zahrah (2012) concluded that tomato growers had medium adoption level followed by low and high adoption level about adoption of protected tomato cultivation, Sushil Kumar Varma, D. P. Rai and Lekh Ram Verma (2015) and Vaishali R. Shitre, Parmeshwari B. Pawar and B. M. Patel (2015) reveled that majority of the potato growers belonged to medium level of adoption.

CONCLUSION

The study revealed that majority of the tomato growers belonged to medium level of knowledge and adoption. Most of tomato growers were found in medium level of adoption in practices like nursery management, selection of variety, land preparation and transplanting, manure, fertilizer and irrigation management. While Plant protection measures found first rank in adoption level and harvesting as well as marketing falls under last rank. The probable reason might be their medium extension contacts and extension participation.

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