

## Knowledge of Tomato Growers About Tomato Production Technology

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### ABSTRACT

*Knowledge of farmers plays an important role in adoption of any new improved agricultural technologies, without appropriate knowledge regarding particular technology knowledge directly affects the adoption rate. The present study was conducted in Matar taluka of Kheda district. Ten villages (Nandoli, Khandhali, Dethali, Heranj, Alindra, Limbasi, Machhiyel, Traj, Tranja and Khadiyarpura) were selected randomly. From each village 10 Tomato growers will be selected randomly. Thus, total 100 Tomato growers were selected for the study. The questionnaire was prepared in accordance with the objectives of the study. The data were collected by personal interview method. The study concluded that Tomato growers possess complete knowledge or high knowledge about land preparation, gap filling, time of sowing, and nature of damage of certain insect pest. Whereas tomato growers possess no knowledge or had very low knowledge about seed treatment, name and dose of fungicide and chemical weed management, name of herbicide and quantity of herbicide*

**Keywords:** Knowledge level, Tomato Growers

### INTRODUCTION

Horticulture sector covering only 8.00 percent of total cropped area in the country and it contributes 24.50 percent to GDP and 54.55 percent to export earning in agriculture sector. The Tomato is having substantial contribution in agriculture economy of Kheda district of Gujarat state. Tomato is cultivated in 3295 hectares of land, production is 105440 metric tones and productivity is 32.00 metric tones. Tomato cultivation is sophisticated and location specific. It is require enough care right from sowing to post harvesting operations. Necessary package of practice must be followed to better yield. It is demands; complete knowledge of production and post harvest technology and it is must be adopted by farmers in right manner and at right time.

### OBJECTIVE

To study the knowledge level of Tomato growers about Tomato production technology.

### METHODOLOGY

The present study was conducted in Matar taluka of Kheda district. Ten villages (Nandoli, Khandhali, Dethali,

Heranj, Alindra, Limbasi, Machhiyel, Traj, Tranja and Khadiyarpura) were selected randomly. From each village 10 Tomato growers were selected randomly. Thus, total 100 Tomato growers were selected for the study. Appropriate statistical procedures like frequency distribution and percentage was used for the analysis of the data.

From the various component of knowledge regarding tomato production technology taken in Table -1 it could be revealed that in case of knowledge regarding land preparation, variety and planting, three component like land preparation (100 per cent), spacing in accordance with farmers practices (100 per cent) and gap filling (100 per cent) all together ranked first, followed by time of sowing (93.00 per cent), seed rate (90.00 per cent), hybrid varieties (85.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. Whereas improved variety ranks 5<sup>th</sup> and seed treatment, name of fungicide and dose of fungicide all together ranked 6<sup>th</sup>.

While knowledge regarding fertilizer management in case of basal application, organic manure ranked 1<sup>st</sup> (78.00 per cent) followed by nitrogen (69.00 per cent), method of application (65.00per cent) and phosphorous (62.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. While in case of

top dressing time of application (70.00 per cent) ranked 1<sup>st</sup> fertilizer (54.00 per cent) ranked 2<sup>nd</sup> and 3<sup>rd</sup>, respectively. followed by Urea/AS/MOP (66.00 per cent), quantity of

**RESULTS AND DISCUSSION**

**Aspect wise Knowledge level of farmers regarding tomato production technology**

**Table 1: Knowledge of the farmers about Tomato production technology**

n=100

No.	Tomato production technology	Frequency	Percentage	Rank
<b>I-Knowledge Regarding Variety, Land Preparation and Planting</b>				
1	Land preparation	100	100.00	I
2	Improved	15	15.00	V
3	Hybrid varieties	85	85.00	IV
4	Seed rate (20-30 gm/Beegha)	90	90.00	III
5	Seed treatment	0	0.00	VI
5.1	Name of fungicide	0	0.00	VI
5.2	Dose of fungicide	0	0.00	VI
6	Time of sowing/TP (Sept-Oct-Nov)	93	93.00	II
7	Spacing (Recommended)	0	0.00	VI
8	Spacing (Farmer Practices)	100	100.00	I
9	Gap filling	100	100.00	I
<b>II-Knowledge Regarding Fertilizer Management</b>				
<b>A</b>	<b>Basal application</b>			
1	-Organic manures	78	78.00	I
2	Nitrogen (33 kg/Beegha)	69	69.00	II
3	Phosphorus (23 kg/Beegha)	62	62.00	IV
4	-Method of application	65	65.00	III
<b>B</b>	<b>Top dressing</b>			
1	Urea/AS/MOP	66	66.00	II
2	Quantity of fertilizer (30 N+30 K/Beegha)	54	54.00	III
3	Time of application	70	70.00	I
<b>III-Knowledge Regarding Weed management</b>				
1	Manual	91	91.00	I
2	Chemical	9	9.00	II
3	Name of herbicide (Metribuzin)	9	9.00	II
4	Quantity of herbicide ( 200 gm/ beegha)	8	8.00	III
<b>IV-Knowledge Regarding Insect control</b>				
<b>1</b>	<b>Tomato fruit borer</b>			
1.1	Nature of damage	77	77.00	I
1.2	Control measure	62	62.00	II
1.3	Name of pesticide	57	57.00	III
1.4	-Dose of pesticide	51	51.00	IV
<b>2</b>	<b>Aphid/white fly</b>			
2.1	Nature of damage	87	87.00	I
2.2	Control measure	73	73.00	II
2.3	Name of pesticide	55	55.00	III
2.4	Dose of pesticide	50	50.00	IV

<b>3</b>	<b>Termite</b>			
3.1	-Nature of damage	83	83.00	I
3.2	-Control measure	53	53.00	II
3.3	-Name of pesticide	31	31.00	III
3.4	-Dose of pesticide	31	31.00	III
<b>V-Knowledge Regarding Disease control</b>				
<b>A</b>	<b>Virus Disease</b>			
<b>1</b>	<b>Leaf curl</b>			
1.1	-Symptoms	83	83.00	I
1.2	-Control measure	64	64.00	II
1.3	-Name of fungicide/insecticide	44	44.00	III
1.4	Dose of fungicide/insecticide	35	35.00	IV
<b>2</b>	<b>Tobacco Mosaic Virus</b>			
2.1	-Symptoms	45	45.00	I
2.2	-Control measure	33	33.00	II
2.3	-Name of fungicide/ insecticide	25	25.00	III
2.4	-Dose of fungicide/ insecticide	23	23.00	IV
<b>B</b>	<b>Fungal Disease</b>			
<b>1</b>	<b>Late Blight</b>			
1.1	-Symptoms	82	82.00	I
1.2	-Control measure	65	65.00	II
1.3	-Name of fungicide	46	46.00	III
1.4	-Dose of fungicide	45	45.00	IV
<b>2</b>	<b>Early Blight</b>			
2.1	-Symptoms	53	53.00	I
2.2	-Control measure	37	37.00	II
2.3	-Name of fungicide	25	25.00	III
2.4	-Dose of fungicide	24	24.00	IV
<b>C</b>	<b>Bacterial Disease</b>			
<b>1</b>	<b>Bacterial Wilt</b>			
1.1	-Symptoms	69	69.00	I
1.2	-Control measure	57	57.00	II
1.3	-Name of fungicide	30	30.00	III
1.4	-Dose of fungicide	28	28.00	IV
<b>VI-Knowledge Regarding Irrigation</b>				
<b>1</b>	<b>Irrigation</b>			
1	No. of irrigation (8-10)	80	80.00	I
2	Critical stage of irrigation	62	62.00	II

Whereas knowledge regarding weed management, manual weed management ranked 1<sup>st</sup>, chemical (9.00 per cent) and name of herbicide (9.00 per cent) both together ranked 2<sup>nd</sup> and quantity of herbicide (8.00 per cent) ranked 3<sup>rd</sup>.

In case of insect control for tomato fruit borer, nature of damage (77.00 per cent) ranked 1<sup>st</sup> followed by control measure (62.00 per cent), name of pesticide (57.00 per cent) and dose of pesticide (51.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. Whereas in case of aphid/white fly nature

of damage (87.00 per cent) ranked 1<sup>st</sup> followed by control measure (73.00 per cent), name of pesticide (55.00 per cent) and dose of pesticide (50.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. While for termite, nature of damage (83.00 per cent) ranked 1<sup>st</sup> followed by control measure (53.00 per cent), name of pesticide (31.00 per cent) and dose of pesticide (31.00 per cent) ranked 2<sup>nd</sup> and 3<sup>rd</sup>, respectively.

For the disease control, in case of viral diseases like leaf curl, symptoms (83.00 per cent) ranked 1<sup>st</sup> followed by control measure (64.00 per cent), name of fungicide (44.00 per cent) and dose of fungicide (35.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. For tobacco mosaic virus, symptoms (45.00 per cent) ranked 1<sup>st</sup> followed by control measure (33.00 per cent), name of fungicide (25.00 per cent) and dose of fungicide (23.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. While for fungal disease like late blight, symptoms (82.00 per cent) ranked 1<sup>st</sup> followed by control measure (65.00 per cent), name of fungicide/insecticide (46.00 per cent) and dose of fungicide (45.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. For early blight, symptoms (53.00 per cent) ranked 1<sup>st</sup> followed by control measure (37.00 per cent), name of fungicide/insecticide (25.00 per cent) and dose of fungicide (24.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively. In case of bacterial disease like bacterial wilt, symptoms (69.00 per cent) ranked 1<sup>st</sup> followed by control measure (57.00 per cent), name of fungicide (30.00 per cent) and dose of fungicide (28.00 per cent) ranked 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>, respectively.

In case of irrigation component no. of irrigation (80.00 per cent) ranked 1<sup>st</sup> and critical stage of irrigation (62.00 per cent) ranked 2<sup>nd</sup>.

## CONCLUSION

From the above discussion it can be concluded that still there is a need of creating proper awareness regarding improved tomato production practices in some area for fetching higher production per unit area which leads to better economic gain and also in improvement of social and economical status of the farmers and subsequently countries economic condition. Tomato growers possess complete knowledge or high knowledge about land preparation, gap filling, time of sowing, and nature of damage of certain insect

pest. Whereas tomato growers possess no knowledge or had very low knowledge about seed treatment, name and dose of fungicide and chemical weed management, name of herbicide and quantity of herbicide

## REFERENCES

- Arneja, C.S. and Khangura, R.S. (2003). A study of the knowledge of pea growers and its association with their selected socio personal characteristics. *Rural India*, Vol. 66: 166-168.
- Kumar, Shailesh and Sharma, Gyanendra. (2009). Constraints in vegetable production in Uttarakhand, *Indian Journal of Ext. Edu.*, Vol. 45: N 1&2, 2009 (84-87).
- Parewa, B.L. (1992). Analysis of constraints in the adoption of vegetable crops by the farmers of panchayat samiti Sambhar lake, district Jaipur (Raj.). M.Sc. (Ag.) Thesis (Unpub.) RAU, Bikaner, campusJobner
- Waman, G.K.; Patil, P.S. and Kokate, K.D. (1996). Factors associated with knowledge about onion production technology. *Maharashtra Journal of Extension Education*, Vol. XV: 21-24.
- Yadav, B.S. (2004). Knowledge and adoption of improved cultivation practices of cauliflower by the farmers of Govindgarh panchayat samiti of Jaipur district of Rajasthan. M.Sc. (Ag.) Thesis (Unpub.) RAU, Bikaner, campus- Jobner.
- Singh, A.K.; Singh, G.P. and Singh, Baldeo (2002). Correlates of Farmers' Knowledge of Improved Chickpea Production Technology. *Indian J. of Extn. Edu.*, 38 (3&4) : 162-167
- Shaky, M.S. Patel, M.M. And, Singh, V.B. (2008). Knowledge level of chickpea growers about chickpea production technology. *Indian Res.J.Ext. Edu.*, 8 (2&3): 65-68.
- Tripathi, S. K.; Mishra, B. and Singh, P. (2006). Knowledge extent of farmers about chickpea production technology. *Indian Res.J.Ext. Edu.*, 6 (3): 1-3.

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