ISSN: 2277- 7695
CODEN Code: PIHNBQ
ZDB-Number: 2663038-2
IC Journal No: 7725

Received: 05-01-2014
Accepted: 08-02-2014

Vol. 2 No. 12. 2014
Online Available at www.thepharmajournal.com

THE PHARMA INNOVATION - JOURNAL

Knowledge level of farmers about vegetable production technology

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The present investigation was carried out in the six purposively selected village of Navagarh Balouda block of Janjgir-Champa district. Seventy two respondents were selected randomly and personally interviewed with the help of the structured interview schedule. The study revolved that the majority of the farmer were belonged to young at group, having high school level of education. The families were medium in size. Majority of the Vegetable (tomato) growing farmers had experience of farming ranging from 11-20 years and having above 10 acres of land.
Farther, present study showed that majority of the Vegetable (Tomato) growers had high level of knowledge (66.11%) and low level of the adoption (72.22%) about tomato production Technology, socio- economic attributes like age experience of farmers economics motivation and source of information head significant relationship with the with knowledge of tomato growers. Similarly in case of adoption of recommended tomato production technology, the selected independent variables *viz*. age size of family, experience of formers, economic motivation and source of information we also observed as associated with the adoption significantly.

Keyword: Families, selected, education.

Introduction

The knowledge of an innovation is pre-requisite for better in implementation and success to get the maximum yield per unite area. In order to increase the level of adoption farmer must be made aware of the recent knowledge and new technology. Vegetable not only provide maximum output but also give more income for unit area of land. In India vegetables are being grown under 33.84 of lakh with production of about 475.13 lakh tons, which is second highest in the world. Among major vegetable crops, tomato occupy maximum of 3.55 lakh hectare with the net production of 54.41 lakh tons. In Chhattisgarh state, tomato occupying an area of 15488 hectare with the production of 2.320 lakh tons. The Janjgir district in Chhattisgarh state is famous for tomato production. As tomato is the main vegetable crop of Navagarh Balouda block. It was thought appropriate to know why the production of tomato is not increasing and tomato growers are not getting no net profit. Is it due to the lake of knowledge about the tomato production technology among the farmers? Therefore to assess the knowledge level of tomato growers regarding tomato production technology, the study entitled "knowledge level of farmers about tomato production technology" was undertaken in 2012-2013 with the following specific objective

1. To study the socio economic profiles of vegetable (tomato) growers.
2. To study the extent of knowledge about tomato production Technology.

3. To study the extent of attitude about tomato production Technology.
4. To find out the relationship between the socio-economic characteristics and knowledge of tomato production technology.

Materials and Methods

The study was conducted in Navagarh Balouda block of Janjgir Chama district in Chhattisgarh state. Out of total 9 blocks in the district, only Navagarh Balouda block was purposely selected for these investigation because majority of farmers grow tomato crop in this block. Six villages were selected for the study looking to the maximum area under tomato production *viz.* Pacheda, Khaira Kera, Sukli Daribhudiya, Khisora Twelve farmers were selected from the each selected villages from the prepared list of tomato growers. In this way a sample of 72 respondents was considered for the study and required data and information were gathered by using a pre-tested semi structured interview schedule. The gathered fact were analyzed through appropriate statistical tools and techniques. For the assessment of the extent of knowledge a teacher made knowledge test was developed. On the basis of assessed knowledge index, the respondents were further categorized into two groups i.e low and high.

Attitude of the respond recording tomato production technology was measured with the help of an attitude scale original developed by Singh (1980) [3] with slight modification as desired according to the local dialect in the study area. The scale consist of 4 positive and 4 negative statements. The categorization was done according to mean and percentage as favorable natural and unfavorable.

Results and Discussion

1. Socio-personal profile of the respondents

Data as shown in table one relieved that the majority of responded i.e 45.83% were belonging to young as group. 44.44% were of middle age and 9.72% belong to old age group. This indicates that most of the farmers, (young and middle age group) were having more interest to learn and adopted tomato production technology, as compared old age group of the tomato Growers. Similar finding we also reported by Kushwaha (1996) [1] that the young age group of tomato Growers adopted modern tomato production technology. Among the 72 tomato growers. about 31.94% farmers had education up to high school level and 22. 22% farmer educated up to primary school level and same percent of the tomato growers also belong to illiterate category whereas 19.45 2.78 and 1.39% farmers were educated up to middle school, higher secondary and undergraduate level respectively. Such reflection was a good sign of spending the knowledge of tomato production technology to boost that tomato production. Kushwaha (1996) [1] studied that education of the respondents had a greater role in the adoption of tomato production technology.

Majority of the tomato growers belong to the scheduled tribe cast i. e. 54.05% farmers were belong to other backward class followed by 13.89% in both the category under schedule caste and general caste respectively. The result also indicated the majority of the tomato growing farmers were having medium size of family (45.83%) whereas 37.5 and 16.66% belong to small and big size of family respectively. Further the data also indicate the majority of respondents (51.38) were having 11 to 20 years of tomato farming experience, whereas 41.66 per cent of the respondents were having up to 10 year of tomato farming experience and only 6.94% of the respondents were having in more than 20 years of tomato farming experience as low and high category of the experience.

2. Extent of knowledge of the tomato growers about tomato production technology

The extent of knowledge was analyzed on the basis of data collected regarding tomato production technology and the result are presented in table 2.

With respect to the extent of knowledge of improved tomato cultivation practices, the result revealed that the majority of the despondent (84.72%) had low level of knowledge regarding the depth of sowing 77.77 percent respondents reported low level of knowledge regarding crop

disease followed by 72.22, 63.88, 50.00, 45.85, 43.05, 41.05, 41.66 and 0 per cent respondents belong to the low level of knowledge category recording seed rate, time of showing, translating, use of weedicides disease control measures, harvesting stage, soil type, land preparation respectively. With respect to knowledge about improved varieties, seed treatment, insect and pest knowledge and insect control. 100 percent respondents had high level of knowledge of tomato production technology. Kushwaha (1996) [1] also found the similar result.

3. Overall knowledge of the tomato growers about tomato production technology

Table 3 reveals that the data related to the level of overall knowledge about recommended tomato production technology of tomato growers. It is clear from the table that majority (66.11%) of tomato growers had acquired high knowledge level whereas 38.88% had acquired low knowledge law knowledge among the tomato-growing farmers regarding tomato production technology.

4. Attitude of tomato growers towards tomato production technology

The finding in table 4 reveals that 45.84% respondents were having favourable, 19.44% percent had un-favourable and 34.72% respondents had natural attitude towards tomato production technology. Similar finding were also reported by Shrivastava (1990) [2].

5. Relationship between the socio-economic characteristics and knowledge of tomato production technology.

To determine the relationship between independent variable and extend acknowledge of the farmers, the correlation analysis was done and results and presented in Table 5. Out of ten selected independent variables, only 5 variable i.e. experience of the farmers, economic motivation and source of information were found positively and a significantly correlated at 0.01% level of probability with the extent of knowledge about tomato production technology. Kushwaha (1996) [1] and Shrivtastava (2001) also reported that these variable were positively associated with the knowledge of the tomato growers. Further it is also clear from the same table that size of family was found positively and a significantly association with the knowledge level at 0.05% level probability. On the other hand, the variables like education, caste, annual income and extension contact the had Non-significant relationship with the level of knowledge of tomato growers.

Table 1: Distribution of the respondents according to their socio-personal characteristic (n=72)

Characteristics	Frequency	Percentage
Age (years)		
▪ Young (up to 35)	33	45.83
▪ Middle (up to35-50)	32	44.44
▪ Old (> 50)	7	9.72
Education		
▪ Illiterate	16	22.22
▪ Primary	16	22.22
▪ Middle	14	19.45
▪ High school	23	31.94
▪ Higher secondary	2	2.78
▪ Under graduate	1	1.39
Caste		
▪ Schedule caste (SC)	10	13.89
▪ Schedule tribe (ST)	39	54.17
▪ Other Backward class (OBC)	13	18.05
▪ General (G)	10	13.89

Size of family		
▪ Small (up to 4 members)	27	37.5
▪ Medium (5-8 members)	33	45.83
▪ Big (> 8 members)	12	16.66
Experience of tomato cultivation		
▪ Low Up to 10 years	30	41.66
▪ Medium 11 to 20 years	37	51.38
▪ High Above 20 years	5	6.44

Table 2 : Distribution of the respondents according to their practice wise extent of knowledge about tomato production technology (n=72)

Improved practices	**Extent of knowledge**			
	Low		**High**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
▪ Soil types	33	45.88	39	54.16
▪ Land preparation	30	41.66	42	58.33
▪ Seed rate	52	72.22	20	27.77
▪ Improved varieties	0	0	72	100
▪ Seed treatment	0	0	72	100
▪ Time of sowing	52	72.22	20	27.77
▪ Depth of sowing	61	84.72	11	15.27
▪ Transplanting	52	72.22	20	27.77
▪ Distance (Row to Row)	37	51.38	35	48.61
▪ Distance (Plant to Plant)	30	41.66	42	58.33
▪ Fertilizer/acre	31	43.05	41	56.94
▪ Use of weedicides	52	72.22	20	27.77
▪ Insect pest knowledge	0	0	72	100
▪ Insect control/insecticides	0	0	72	100
▪ Disease knowledge	56	77.77	16	22.22
▪ Disease control measures	46	63.88	26	36.11
▪ Harvesting stage	36	50	36	50

Table 3: Distribution of the respondents according to their overall knowledge regarding recommended tomato technology (n=72)

Knowledge level	**Frequency**	**Percentage**
▪ Low (up to 46 scores)	38	38.88
▪ High (above 46 scores)	44	66.11

Table 4: Distribution of the respondents according to their attitude towards tomato production technology (n=72)

Attitude	**Frequency**	**Percentage**
▪ Unfavourable	14	19.44
▪ Neutral	25	34.72
▪ Favourable	33	45.84

Table 5: Co-efficient of correlation between the socio-economic characteristic and knowledge of tomato production technology.

S. No.	Variables	'r' value
1	Age	0.7348**
2	Education	0.1658
3	Caste	0.0601
4	Size of family	0.2846*
5	Land holding	0.0985
6	Experience of farmers	0.7607**
7	Annual income	-0.0707
8	Economic motivation	0.6773**
9	Extension contact	0.1092
10	Source of information	0.6724**

* Significant at 0.05 level if probability **Significant at 0.01 level of probability

Conclusion

The majority of the responded were in the young age group with high school level of education. Majority of the respondents belongs to medium size of families and they had maximum experience 11 to 20 years in tomato cultivation and the most of the respondent what belonging to schedule tribe category as cast. As regards to knowledge the majority of farmer had high level of knowledge (66.11%) about tomato production technology specially related with land preparation. use of improved varieties, seed treatment, fertilizer dose, insect pest and disease and harvesting stage. About 46% respondents had favorable and only 19.45% respondents had unfavourable attitude towards tomato production technology. Socio-economic attributes like age, experience of farmers, economic motivation and the source of information had significant relationship with the knowledge of tomato growers.

References

1. Kushwaha PL. Adoption behavior in relation to economics of tomato production in Maihar block of Satna district, Madhya Pradesh. M. Sc. (Ag.) Thesis, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (M.P.); c1996.
2. Shrivastava DK. Impact of Institution Village Linkage Programme on production and socio-economic status of farmers in Raipur district of Chhattisgarh. M.Sc. (Ag.) Thesis. Indira Gandhi Agricultural University, Raipur (C.G.); c1990.
3. Singh B. Small farmers and modern farm technology. Rural India. 1980;43(5):89.84+.