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Knowledge level of the okra growers regarding the recommended okra production technology

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Abstract

Agriculture forms the backbone of Indian economy. Okra [*Ablemoschus esculentus* (L.) Moench] is the most important short duration vegetable crop extensively grown throughout the country during summer and kharif seasons. India is the largest okra producing country in the world. Gujarat is largest in area and productions of okra in India. *Ex-post facto* research design was used for the study. Gandhinagar District of Gujarat State was selected purposively as it has covered important okra cultivation areas. Using multistage random sampling technique, all talukas were selected purposively from the Gandhinagar district. Four okra crop growing villages from each taluka were selected randomly from all talukas on the basis of higher areas covered under okra cultivation. Thus, the sixteen villages were selected for the study. From each selected villages, 10 were selected randomly making a sample of 160 respondents. Majority of the okra growers (68.13%) were having medium level of knowledge followed by 16.25 and 15.62 per cent okra growers had high and low level of knowledge about recommended okra production technology, respectively.

Keywords: Okra production, knowledge level, recommended technology, okra growers

Introduction

Okra [*Abelmoschus esculentus* (L.) Moench] is the most important short duration vegetable crops extensively grown throughout the country during summer and kharif seasons. It has good prospect in Gujarat as well as in Gandhinagar district. In India, okra is called "Lady's finger" in English and "Bhindi" in Hindi. It is native of tropical and sub-tropical Africa (Yawalkar, 1973) [9]. Okra belonging to the family Malvaceous. It is one of the most popular and important vegetable crops, having good demand throughout the year for its immature fruits which are eaten as cooked vegetable or added to soup.

In Gujarat State, Okra is mainly grown in Surat, Tapi, Navsari, Vadodara, Ahmedabad, Gandhinagar, Anand, Bhavanagar, Junagadh, Mehsana, Patan and Banaskantha districts. Okra occupies an area of 76.029 thousand hectares with a production of 9.086 lakh tones in Gujarat, (Directorate of Horticulture, Gandhinagar, Gujarat state, (Anonymous 2016-17a) [1]. As one of the foreign exchange earner crop okra contributing 60 per cent of fresh green vegetables (excluding, potato, onion and garlic) being exported to Gulf countries. (Jasof, 1989) [3].

Gandhinagar is the most important okra growing district of Gujarat State. The area under okra in this district was 3270 hectares with a production about 29430 metric tonnes and productivity of 9000 kg/ha during 2016-17. But, the harvested yield of research station was recorded as 11500

kg/ha (Anon., 2016-17^a) [1]. Thus, the average yield of okra in the district was lower in comparison to its potential yield.

Objective

Knowledge level of the okra growers regarding the recommended okra production technology

Methodology

Ex-post facto research design was used for the study. Gandhinagar District of Gujarat State was selected purposively as it has covered important okra cultivation areas. Using multistage random sampling technique, all talukas viz., Kalol, Mansa, Gandhinagar and Dehgam were selected purposively from the Gandhinagar district. Four okra crop growing villages from each taluka were selected randomly from all talukas on the basis of higher areas covered under okra cultivation. Thus, the sixteen villages were selected for the study. From each selected villages, 10 were selected randomly making a sample of 160 respondents.

Based on an extensive review of literature, consultation with extension personnel and experts of the subject, some important variables viz., age, education, social participation, land holding, annual income, mass media exposure, extension participation, irrigation method, farm mechanization, scientific orientation, economic motivation were selected as independent variables. They were

measured with the help of the scales and indices developed by past researchers as well as structured schedules/tests which were framed for the purpose. Level of knowledge and technological gap was considered as dependent variable in the present study. For the measurement of technological gap, a list of the recommended package of practices of the okra crop was prepared with the help of extension personnel and experts of the subject. The farmers were asked to indicate the practices they adopted in their field. Farmers were grouped into three categories *viz.*, low, medium and high extent of technological gap based on their

technological gap score using mean and standard deviation.

Results and Discussion

Knowledge level of the okra growers regarding the recommended okra production technology

An attempt has been made to assess the knowledge level of okra growers about the recommended okra production technology. On the basis of knowledge score obtained by the respondents, they were categorized into three groups with the help of mean and standard deviation. The data in this regard are presented in Table 1.

Table 1: Distribution of the okra growers according to their knowledge regarding recommended okra production technology (n = 160)

Sr. No.	Level of knowledge	Frequency	Per cent
1	Low (upto 14.09 score)	025	15.62
2	Medium (14.10 to 22.69 score)	109	68.13
3	High (Above 22.69 score)	026	16.25
Total		160	100.00
Mean = 18.39		S.D. = 4.30	

The data presented in Table 1 indicate that majority of the okra growers (68.13%) were having medium level of knowledge, followed by 16.25 per cent and 15.62 per cent okra growers had high and low level of knowledge about recommended okra production technology, respectively. Thus, it can be inferred that majority (68.13%) of the okra growers had medium level of knowledge. The probable reason for this might be that they had medium level of extension contact and medium utilization of information sources.

The findings are supported by the findings of Patel and Patel

(2013)^[6] and Kumar *et al.* (2014)^[5].

Practices wise knowledge level of the okra growers regarding the recommended okra production technology

The Practices wise knowledge of the okra growers on okra production technology was studied. The data in this regards in terms of frequency and knowledge level among with rank are presented in Table 2.

The data presented in Table 2 indicate that the practice wise knowledge level varied from practice to practice. The practice wise knowledge level among the okra growers was ranging from 28.75 per cent to 96.88 per cent.

Table 2: Knowledge level of the respondents regarding the recommended okra production technology (n = 160)

Sr. No.	Statements	Knowledge		Rank according to knowledge level
		No. of Respondents	Per cent (%)	
1	How many tillage of plough/tractor are required to prepare the soil for okra?	72	45.00	XVIII
2	Which type of soil is suitable to okra crop?	82	51.25	XVI
3	Name any two okra varieties recommended for sowing in your area?	87	54.38	XIII
4	What is the recommended seed rate per hectare for okra? (kg/ha)	115	71.88	V
5	Which fungicide is recommended for seed treatment of okra? (Name of fungicide)	66	41.25	XX
6	What is the recommendation dose of application of fungicide for seed treatment? (gm/kg)	70	43.75	XIX
7	Which diseases can be prevented by treating the okra seeds before sowing?	65	40.63	XXI
8	Which bio-fertilizers are recommended for seed treatment of okra?	85	53.13	XV
9	Growing season? <i>Kharif/Summer</i>	155	96.88	I
10	What is the recommended spacing for sowing of okra?	112	70.00	VI
11	What is the recommended time for sowing of okra?	145	90.63	III
12	How much FYM is recommended for the okra crop? (tones/ha)	86	53.75	XIV
13	What is the recommended dose of fertilizers for okra? (N-P-K in Kg/ha)	93	58.13	IX
14	What is the recommended time of application of fertilizer in okra?	95	59.38	VIII
15	When the interculturing should be discontinued in okra crop? (After how many days of sowing?)	48	30.00	XXII
16	Which are the recommended weedicides to control weeds in okra crop?	47	29.37	XXIII
17	What is the rate of application of weedicides?	91	56.88	XI
18	How much irrigation is recommended for okra crop?	135	84.38	IV
19	Mention the duration of irrigation is recommended for okra crop	92	57.50	X
20	Name the sucking pest causing damage to okra crop.	46	28.75	XXIV
21	Which insecticides are recommended to control the sucking pests in okra?	81	50.63	XVII
22	Which are the prevalent diseases in okra crop?	90	56.25	XII
23	Which fungicide is recommended to control diseases of okra crop?	110	68.75	VII
24	When okra crop is harvested?	151	94.38	II

The data presented in Table 2 indicate that maximum high knowledge farmers had about growing season (96.88%) followed by okra crop harvesting (94.38%), recommended time for sowing of okra crop (90.63%), irrigation is recommended for okra crop (84.38%), recommended seed rate (71.88%), spacing (57.50%), recommended spacing for sowing of okra (70.00%), fungicide recommendation to control diseases of okra crop (68.75%), recommended time of application of fertilizer in okra (59.38%), recommended dose of fertilizers for okra (58.13%), duration of irrigation is recommended for okra crop (57.50%), rate of application of weedicides (56.88%), prevalent diseases in okra crop (56.25%), varieties recommended for sowing in your area (54.38%), use of FYM (53.75%), bio-fertilizers recommendation for seed treatment (53.13%), soil is suitability to okra crop (51.25%) and recommended insecticide to control the sucking pests (50.63%).

The medium knowledge level was observed in tillage of plough/tractor are required to prepare the soil (45.00%), recommendation dose of application of fungicide for seed treatment (43.75%), recommended fungicide for seed treatment (41.25%) and disease prevention by treating the okra seeds before sowing (40.63%).

The low knowledge level was found in interculturing should be discontinued in okra crop after how many days of sowing (30.00%), recommended weedicides to control weeds (29.37%) and name the sucking pest causing damage to okra crop (28.75%).

Conclusion

Majority of the okra growers (68.13%) were having medium level of knowledge followed by 16.25 and 15.62 per cent okra growers had high and low level of knowledge about recommended okra production technology, respectively. Revealed that the high knowledge level was observed in growing season (96.88%) followed by okra crop harvesting (94.38%), recommended time for sowing of okra crop (90.63%) and the low knowledge level was found in interculturing should be discontinued in okra crop after how many days of sowing (30.00%), recommended weedicides to control weeds (29.37%) and name the sucking pest causing damage to okra crop (28.75%).

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