P-ISSN: 2618-0723
E-ISSN: 2618-0731

NAAS Rating: 5.04
www.extensionjournal.com

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 6; June 2025; Page No. 346-348

Received: 21-03-2025
Accepted: 23-04-2025

Indexed Journal
Peer Reviewed Journal

Extent of technological gap in recommended okra production technology among the okra growers

[1]SJ Baldaniya, [2]KV Mashaliya and [3]HA Chaudhari

[1]Senior Project Officer, BAIF, Gujarat, India

[2]Assistant Research Scientist, Department of Agriculture Extension and Communication, GNFSU, Halol, Gujarat, India

[3]Ph. D Scholar, Department of Agriculture Extension and Communication, C.P.C.A., S.D.A.U., Sardarkrushinagar, Gujarat, India

DOI: https://www.doi.org/10.33545/26180723.2025.v8.i6e.2047

Corresponding Author: SJ Baldaniya

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 (63.75%) of the okra growers were having medium technological gap followed by 23.75 and 12.50 per cent okra growers were having high and low technological gap, respectively.

Keywords: Okra production, technological gap, recommended technology

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. 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.

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

To determine the extent of technological gap in recommended okra production technology among the okra growers

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

Extent of technological gap in recommended okra production technology among the okra growers

The technological gap refers to the difference between technology recommended by the scientists and technology adopted by the farmers. It was felt that agricultural technology is not generally adopted by the farmers completely in all respects. As a result, technological gap appears and poor yield is obtained. Keeping this in view, technological gap has been studied.

Table 1: Distribution of the okra growers according to their overall technological gap (n=160)

Sr. No.	Technological gap	Frequency	Per cent
1	Low (Up to 5.10 score)	020	12.50
2	Medium (5.11 to 9.30 score)	102	63.75
3	High (Above 9.30 score)	038	23.75
Total		160	100.00
Mean = 7.20	S.D. = 2.10		

The data presented in Table 1 indicate that majority (63.75%) of the okra growers were having medium technological gap, followed by 23.75 per cent and 12.50 per cent okra growers were having high and low technological gap, respectively. Thus, it can be inferred that majority of the okra growers (63.75%) had medium extent of adoption. The probable reason for this might be that they had medium level of knowledge, extension contact, scientific orientation, as well as several constraints they faced and limited resources with them.

The findings are supported by the findings of Kumar (2009) [7] and Desai (2013) [2].

Practices wise extent of technological gap in recommended okra production technology among the okra growers

The extent of technological gap in adoption of different recommended okra production technology among the okra growers are summarized in Table 2.

The data presented in Table 2 indicate that the practice wise technological gap varied from practice to practice. The practice wise technological gap among the okra growers was ranging from 6.25 per cent to 83.12 per cent.

Table 2: Extent of technological gap in recommended okra production technology among the respondents (n=160)

Sr. No.	Okra production technology	Adoption (%)	Technological gap (%)	Rank according to technological gap
1	Varieties grown	43.75	56.25	VII
2	Seed rate	59.38	40.62	IX
3	Time of sowing	93.75	06.25	X
4	Seed treatment	18.75	81.25	III
5	Spacing	42.50	57.50	VI
6	FYM	21.88	78.12	IV
7	Chemical Fertilizer	56.25	43.75	VIII
8	Total number of irrigation	87.50	12.50	IX
9	Methods of Weed control and inter-culturing	31.25	68.75	V
10	Use of weedicides	17.50	82.50	II
11	Plant protection measures	16.88	83.12	I
Average technological gap			55.51	

The data presented in Table 2 indicate that the high technological gap was observed in plant protection measures (83.12%) followed by use of weedicides (82.50%), seed treatment (81.25%), use of FYM (78.12%), method of weed control and inter-culturing (68.75%), spacing (57.50%) and varieties grown (56.25%). The medium technological gap was observed in chemical fertilizer (43.75%) and seed rate (40.62%). The low technological gap was found in number of irrigation (12.50%) and time of sowing (6.25%).

The overall technological gap as calculated by combining all the listed 11 practices together was (55.51%). Thus, it could be inferred that (44.49%) adoption of recommended technology of okra crop by the okra growers. The possible reason for these might be that majority of the respondents were not aware about many practices. Further, due to many reasons like lack of knowledge, lack a technical guidance and limited resources available with respondents.

The findings are supported by the earlier findings of Kaid (2004) [5] and Gadhavi (2008) [3].

Conclusion

Majority (63.75%) of the okra growers were having medium technological gap followed by 23.75 and 12.50 per cent okra growers were having high and low technological gap, respectively. It is there for revealed that the high technological gap was observed in plant protection measures (83.12%) followed by use of weedicides (82.50%), seed treatment (81.25%), use of FYM (78.12%), method of weed control and inter-culturing (68.75%), spacing (57.50%) and varieties grown (56.25%).

References

1. Anonymous. District-wise area and production in Gujarat State in the okra crops [Internet]. Gandhinagar: Directorate of Horticulture, State Department; 2016-17. http://www.doh.gujarat.gov.in
2. Desai HK. Adoption of recommended hybrid castor cultivation technology by castor growers in Sabarkantha district of Gujarat state [MSc thesis]. Sardarkrushinagar: Sardarkrushinagar Dantiwada Agricultural University; 2013.
3. Gadhavi YR. Technological gap in cotton cultivation technology among the farmers of Sabarkantha district of Gujarat state [MSc thesis]. Sardarkrushinagar: Sardarkrushinagar Dantiwada Agricultural University; 2008.
4. Guilford JP. Fundamental statistics in psychology and education. New York: McGraw Hill Book Co. Inc.; 1956. p. 317-9.
5. Kaid SV. Technological gap in kharif fennel cultivation by fennel growers in Palanpur taluka of Banaskantha district of Gujarat state [MSc thesis]. Sardarkrushinagar: Sardarkrushinagar Dantiwada Agricultural University; 2004.
6. Kerlinger FN. Foundation of behavioral research. New Delhi: Surjeet Publication; 1976. p. 198-205.
7. Kumar S. A study on technological gap in adoption of the improved cultivation practices by the soybean growers [MSc thesis]. Dharwad: University of Agricultural Sciences; 2009.
8. Sahu PK. Agricultural and applied statistics-1. New Delhi: Kalyani Publishers; 2010.