

Technological Gap in Adoption of Sugarcane Cultivation Practices by Sugarcane Growers

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ABSTRACT

A study was conducted on technological gap in adoption of sugarcane cultivation practices in navsari district of Gujarat. By following the simple random sampling, total 100 sugarcane growers from ten villages were selected. The ex-post-facto research design was used for study. The finding revealed that 65.00 per cent of sugarcane growers had medium technological gap, followed by low (19.00 per cent) and high (16.00 per cent) technological gap in sugarcane cultivation practices. Among the various recommended technologies, the highest technological gap was observed in adoption of plant protection measures (81.00 per cent) followed by basal fertilizer (70.00 per cent), harvesting (64.00 per cent), application of FYM (62.00 per cent), weeding and inter-culturing (60.00 per cent), seed rate (47.00 per cent), irrigation (43.00 per cent) and spacing (40.00 per cent), time of sowing (27.00 per cent) and variety (15.00 per cent).

Keywords: Technological gap, Knowledge

INTRODUCTION

In Gujarat, sugarcane covers about 1901 hundred ha. Area with 13763 hundred MT productions (Directorate of Agriculture Gujarat State). Sugarcane is cultivated in almost all the districts of south Gujarat state. However there is still a wide gap between the production potential and the actual production realized by the sugarcane growers. This may be due to partial adoption of recommended packages of packages of practices by the sugarcane growers. Technological gap is major problem in increase sugarcane production. No systematic effort was made to study the technological gap existing in various components of sugarcane cultivation, the present study was therefore undertaken to find out the technological gap in adoption of recommended sugarcane production technology.

OBJECTIVES

- (i) To find out the knowledge level of sugarcane growers regarding improved cultivation practices
- (ii) To determine the technological gap in adoption of improved cultivation practices by sugarcane growers.

METHODOLOGY

The present investigation was undertaken in navsari district which comes under jurisdiction of Navsari Agricultural University, Navsari. This district is comprised of five talukas, all taluka were selected for study. From each taluka two villages were selected, so, total 10 villages were randomly selected. From each selected village, 10 farmers were randomly selected. Hence, total sample size was 100 farmers. The dates were collected in the light of objectives of the study with help of well structured pretested Gujarati version interview schedule. For measurement of depended and in depended variables included study, different scales and scoring techniques developed by other scientists were used with slight modifications. The data so collected were coded, classified, tabulated and analyzed in order to make the finding meaningful.

To measure the knowledge structured schedule was developed. By including statements containing information about improved sugarcane production practices. Each question had one mark for incorrect answer. Knowledge were measured by following formula

$$K_i = \frac{X_1+X_2+\dots+X_n}{N} \times 100$$

Where,

K_i Knowledge index

X₁+X₂+.....X_n = Total no. of correct answer (i.e. total sum)

N Total no. of item in test

Technological gap was measured with the help of mean Technological gap developed by Ray *et.al.*,(1995). The technological gap of a particular practice expressed in percentage was:

$$\text{Mean technological gap} = \frac{S-A}{S} \times 100$$

Where,

S= Standard score (Total number of respondents)

A= Actual score (Actual technology adopted)

RESULTS AND DISCUSSION

Knowledge level of sugarcane growers

Knowledge plays an important role in covert as well as overt behavior of an individual. Knowledge was measured with the help of teacher made test developed for the purpose. As discussed earlier, the knowledge score for each farmer was calculated and the respondents were grouped in to three categories viz., low, medium and high. Data regarding this aspect are presented in Table1.

Table1: Distribution of the sugarcane growers according to their knowledge regarding improved sugarcane cultivation practices. n = 100

Sr. No.	Level of Knowledge	No.	Per cent
1	Low (Below 40 per cent)	16	16.00
2	Medium (Between 40 to 78 per cent)	65	65.00
3	High (Above 78 percent)	19	19.00

It is clear from Table 1 that 65.00 per cent of the sugarcane growers had medium level of knowledge regarding improved sugarcane cultivation practices followed by 19.00 per cent had high level of knowledge and 16.00 per cent sugarcane growers had low level of knowledge regarding improved sugarcane cultivation practices, respectively.

Great majority (84.00 per cent) sugarcane growers had medium to high level of knowledge regarding improved sugarcane cultivation practices.

Overall technological gap about sugarcane cultivation practices

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. On the basis of score obtained by the sugarcane growers, they were grouped in to three categories viz., low, medium and high technological gap. The data regarding this aspect are presented in Table 2.

Table2: Distribution of the sugarcane growers according to their overall technological gap n=100

Sr. No.	Overall technological gap	No.	Per cent
1	Low (below 23 per cent)	19	19.00
2	Medium (between 23 to 52 per cent)	65	65.00
3	High (above 52 per cent)	16	16.00

The data in Table 2 clearly indicate that 65.00 per cent of sugarcane growers had medium technological gap, followed by low (19.00 per cent) and high (16.00 per cent) technological gap in adoption of improved sugarcane cultivation practices, respectively.

The possible reason for this might be that the farmers could not get the message of improved cultivation practices in time in acceptable form. Further, farmers might have tried their best to use and adopt the improved sugarcane cultivation practices but some constraints might have hindered them to do so, and hence technological gap might have observed.

Technological gap in adoption of improved sugarcane cultivation practices

The average technological gap in adoption of different component of improved sugarcane cultivation practices among the sugarcane growers are summarized in Table3.

Table3: Average technological gap in different components

of improved sugarcane cultivation practices.

n = 100

Sr. No.	Different components of improved sugarcane cultivation practices	Technological gap (%)	Rank
1	Variety	15.00	X
2	Seed rate	47.00	VI
3	Time of sowing	27.00	IX
4	Spacing	40.00	VIII
5	Application of FYM	62.00	IV
6	Application of basal fertilizer	70.00	II
7	Irrigation	43.00	VII
8	Weeding and inter-culturing	60.00	V
9	Plant protection measures	81.00	I
10	Harvesting	64.00	III
Overall technological gap (Average)		51.00	

It could be inferred from the Table 3 that the highest technological gap was observed in adoption of plant protection measures (81.00 per cent) and was ranked the first followed by basal fertilizer (70.00 per cent), harvesting (64.00 per cent), with second and third rank, respectively.

The practices viz., application of FYM (62.00 per cent) and weeding and inter-culturing (60.00 per cent) were ranked IV and V, respectively. The respondents assigned VI, VII and VIII rank to technological gap in seed rate (47.00 per cent), irrigation (43.00 per cent) and spacing (40.00 per cent), respectively. With regard technological gap, the practices viz., time of sowing (27.00 per cent) and variety (15.00 per cent) was ranked IX and X, respectively.

CONCLUSION

It can be concluded that majority of the responded (65.00 per cent) belonged to medium level of knowledge and technological gap category. The present study indicated that more technological gap observed in the plant protection measures (81.00 per cent) followed by basal fertilizer (70.00 per cent) and harvesting (64.00 per cent). Technological gap was found varied from component to component.

REFERENCE

- Darandle A. D. (2010) Attitude of tribal farmer towards organic farming practices in maize crop. (M.Sc.) Unpublished Thesis, AAU Anand.
- Goudappa S.B., Biradar G.S. and Bairathi R., (2012). Technological gap in chilli cultivation perceived by farmers *Raj. J. Extn. Edu.* 20 : 171-174

Received : September 2014 : Accepted : December 2014