

Technological Gap in *Kharif* Fennel Cultivation by Fennel Growers of Banaskantha District of

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ABSTRACT

Fennel is an important spice crop of North Gujarat state. Palanpurtaluka of Banaskantha district has been considered as productively potential region of fennel crop due to assured irrigation facilities and favourable soil and climatic conditions. However, there is still a wide gap between the production potential and the actual production realized by the fennel growers. This may be due to partial adoption of recommended package of practices by the fennel growers. Technological gap is a major problem in increasing fennel production in Palanpur taluka. So far, no systematic effort was made to study the technological gap existing in various components of fennel cultivation. The present study was therefore, undertaken to find out the technological gap in adoption of recommended A/75/7/fennel production technology. Total 120 fennel growers from 40 villages were selected randomly. Majority (91.67 %) of the respondents had medium level of knowledge, whereas, 6.66 per cent and 1.67 per cent of the respondents had low and high level of knowledge about fennel production technology. Majority (79.17 %) of them were in medium level of adoption followed by 18.33 percent in low and only 2.50 per cent in high level of adoption. The probable reason might be their medium to low level of knowledge. It was also observed that there was higher technological gap in plant protection measures (76.03 %) followed by nursery raising (68.65 %). Medium technological gap was observed in recommended variety (60.83 %), irrigation schedule (59.06 %), chemical fertilizers (49.58 %) and harvesting (33.89 %). The low (up to 33.00 %) technological gap was found in transplanting (24.31 %), hand weeding (14.17 %), farm yard manure (9.17 %), interculturing, earthing up (6.67 %) and gap filling (2.5 %).

Keywords: Technological gap, knowledge

INTRODUCTION

Fennel is an important spice crop of Palanpur taluka of Banaskantha district of Gujarat state. Palanpur taluka has been considered as productively potential region of fennel crop due to assured irrigation facilities and favourable soil and climatic conditions. However, there is still a wide gap between the production potential and the actual production realized by the fennel growers. This may be due to partial adoption of recommended package of practices by the fennel growers. Technological gap is a major problem in increasing fennel production in Palanpur taluka. So far, no systematic effort was made to study the technological gap existing in various components of fennel cultivation, the present study was therefore undertaken to find out the technological gap

in adoption of recommended *kharif* fennel production technology.

OBJECTIVES

The present study was conceived with a general objective of assessing the technological gap in adoption of recommended fennel cultivation technology.

- 1 To ascertain the knowledge level of the fennel growers pertaining to recommended fennel production technology.
- 2 To know the extent of adoption of recommended fennel production technology by the fennel growers.

- To determine the technological gap among the fennel growers against selected recommended fennel production technology.

METHODOLOGY

The present study was undertaken in Palanpur taluka of Banaskantha district of Gujarat state. There are 40 villages in the taluka where fennel crop is being grown by majority farmers. Ten villages were randomly selected for the present study. From each of the selected village, twelve fennel growers were randomly selected, making a total random sample of 120 fennel growers.

Knowledge level of the respondents about fennel production technology was determined by using the teacher made test based on the scale developed by Jha and Singh (1970). Extent of adoption of recommended fennel production technology was measured by using adoption quotient the formula developed by Sengupta (1967). Technological gap was determined with the help of the formula developed by Dubey *et al.* (1981).

The data were collected with the help of structured interview schedule. The statistical tools used to analyse the data were percentage, mean score, standard deviation and coefficient of correlation.

RESULTS AND DISCUSSION

Knowledge level of the fennel growers

Knowledge is the cognitive behaviour of an individual. Knowledge plays an important role in covert as well as overt behaviour of an individual. Knowledge was measured with the help of teacher made test developed for the purpose. As discussed earlier, the knowledge index for each farmer was calculated and the respondents were grouped into three categories *viz.*, low, medium and high. Data regarding this aspect are presented in Table 1.

Table 1: Distribution of The Respondents According To Their Level of Knowledge Regarding Fennel Production Technology n = 120

Sr. No.	Level of knowledge	Frequency	Per cent
1	Low (0 to 33.33 index)	08	6.66
2	Medium (33.34 to 66.66 index)	11	91.67
3	High (Above 66.67 to 100.00 index)	02	1.67

It is evident from the Table 1 that majority (91.67 %) of the respondents had medium level of knowledge, whereas, 6.66 per cent and 1.67 per cent of the respondents had low and high level of knowledge about fennel production technology.

From this finding, it can be concluded that majority of the respondents had medium level of knowledge. The probable reason might be that most of the respondents were educated so they could easily understand and acquire skills about fennel production technology.

Extent of Adoption of Recommended Fennel Production Technology

The “adoption process” is the mental process through which an individual passes from first hearing about an innovation to its final adoption. An ‘adoption’ is a decision to continue full use of an innovation. With a view to find out the extent of adoption of *kharij* fennel production technology, the farmers were asked to give information about package of practices adopted by them. Data regarding this aspect are presented in Table 2.

Table 2 : Distribution Of The Respondents According To Extent Of Adoption Of Recommended Fennel Production Technology n = 120

Sr. No.	Extent of adoption	Freq- uency	Per cent
1	Low (0 to 33.33 index)	22	18.33
2	Medium (33.34 to 66.66 index)	95	79.17
3	High (Above 66.67 to 100.00 in- dex)	03	02.50

The data presented in Table 2 reveal that majority (79.17 %) of the respondents were in medium level of adoption followed by only 18.33 per cent in low and only 2.50 per cent respondents were observed having high level of adoption. The probable reason might be their medium to low level of knowledge.

Technological Gaps in Adoption of Fennel Production Technology

The technological gap refers to the difference between technology adopted by the farmers and technology recommended by the scientists. 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.

The average technological gap in adoption of

different component of fennel production technology among the fennel growers are summarized in Table 3

technological gap was found varied from component to component. The average technological gap among the fennel growers was ranged from 2.5 per cent to 76.03 per cent.

It could be seen from Table 3 that the average

Table 3: Average Technological Gaps in Different Components of Fennel Production Technology

n = 120

Sr. No.	Different component of fennel production technology	Adoption (%)	Technological gap (%)	Rank
1	Recommended variety	39.17	60.83	III
2	Nursery raising	31.35	68.65	II
3	Transplanting	75.69	24.31	VII
4	Farm yard manure	90.83	09.17	IX
5	Chemical fertilizer	50.42	49.58	V
6	Irrigation schedule	40.94	59.06	IV
7	Gap filling	97.50	02.50	XI
8	Interculturing and earthing up	93.33	6.67	X
9	Hand weeding	85.83	14.17	VIII
10	Plant protection measures	23.97	76.02	I
11	Harvesting	66.11	33.89	VI
Average		63.20	36.80	

It could be further inferred that there was a higher (above 66.00 %) technological gap in plant protection measures (76.02 %) of nursery raising (68.65 %). The medium (34.00 to 66.00 %) technological gap was observed in recommended variety (60.83 %) irrigation schedule (59.06 %), chemical fertilizer (49.58 %) and harvesting (33.89 %).

The low (up to 33.00 %) technological gap was found in transplanting (24.31 %), hand weeding (14.17 %), farm yard manure (9.17 %), interculturing, earthing up (6.67 %) and gap filling (2.5 %).

The overall technological gap combining all the listed 11 practices together was 36.80 per cent. Thus, it could be inferred that 63.20 per cent adoption of recommendation of fennel crop by the fennel growers.

CONCLUSION

Majority of the fennel growers had medium level of knowledge regarding the recommended fennel production technology. Majority of the fennel growers were found to have medium extent of adoption. The maximum technological gap was observed in plant protection measures, nursery raising.

The overall technological gap was found 36.80 per cent.

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