

Technological Gap in Adoption of Improved Cultivation Practices by Soybean Growers

A.H.Parikh¹, N.V.Soni² and J.K. Chaudhari³

1&3 P.G. Students, Department of Extension Education: BACA, AAU, Anand-388 110

2 Associate Extension Educationist, Office of DEE, AAU, Anand-388 110

Email: alpesh44parikh@yahoo.in

ABSTRACT

A study was conducted on technological gap in adoption of improved cultivation practices by soybean growers in dahod district of Gujarat. By following the simple random sampling, total 120 soybean growers from twelve villeges were selected. The ex-post-facto research design was used for study. The finding revealed that 60.00 per cent of soybean growers had medium technological gap, followed by low (21.66 per cent) and high (18.34 per cent) technological gap in adoption of improved soybean cultivation practices. Among the various improved technologies, the highest technological gap was observed in adoption of plant protection measures (80.68 per cent) followed by application of basal fertilizer (70.17 per cent), harvesting (64.17 per cent), application of FYM (61.67 per cent), weeding and inter-culturing (60.22 per cent), seed rate (47.50 per cent), irrigation (42.64 per cent), spacing (40.42 per cent), time of sowing (26.67 per cent) and variety (15.00 per cent).

Keywords: Technological gap, Adoption

INTRODUCTION

Technological gap primarily depends upon the transfer of an application of technology by making the use of available resources. It is intimately related with the application of science and technology in the farming. Therefore, increase in agricultural production, economic and social benefits are directly dependent on the extent to which farmers use the improve technology. Its success is frequently dependent on an understanding of the society in which it is to take place, knowledge of the social and cultural factors that conditioning farmer's responsiveness to technological change and the ability to obtain willing cooperation of the people involved.

In Gujarat, soybean covers about 84,000 ha area with 68,040 million tones productions (Anonymous 2011). Soybean is cultivated as one of the major oilseed crop, in almost all the district of Gujarat state. However there is still a wide gap between the production potential and the actual production realized by the soybean growers. This may be due to partial adoption of improved cultivation practices by soybean growers. Technological gap is a major problem in increase soybean production. No systematic effort was made to study the technological gap existing in various components of soybean cultivation, the present study was therefore

undertaken to find out the technological gap in adoption of improved cultivation practices by soybean growers.

OBJECTIVES

- (i) To study extent of the overall technological gap in adoption of improved cultivation practices by soybean growers.
- (ii) To study the practice wise technological gap in adoption of improved cultivation practices by soybean growers.

METHODOLOGY

Dahod district is comprised of seven talukas. Out of these, two talukas namely Dahod and Garbada was purposively selected for the study as they have maximum area under soybean cultivation than other talukas. Total 6 villages were purposively selected as they have maximum area under soybean cultivation than other villages from each selected taluka. Thus total 12 villages were selected from 2 talukas. From each selected villages, 10 farmers were randomly selected. Hence, total sample size was 120 farmers. The data were collected in the light of the objectives of the study with the help of well structured pre tested Gujarati version interview schedule. For measurement of dependent and independent variables included in 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.

RESULTS AND DISCUSSION

Overall technological gap about improved soybean 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 soybean growers, they were grouped in to three categories viz., low, medium and high technological gap. The data regarding this aspect are presented in Table 1.

Table 1: Distribution of the soybean growers according to their overall technological gap

n=120

Sr. No.	Overall technological gap	Frequency	Per cent
1	Low (below 40.28 score)	26	21.66
2	Medium (between 40.28 to 56.02 score)	72	60.00
3	High (above 56.02 score)	22	18.34

Mean = 48.15

S.D. = 7.87

The data in Table-1 clearly indicate that 60.00 per cent of soybean growers had medium technological gap, followed by low (21.66 per cent) and high (18.34 per cent) technological gap in adoption of improved soybean cultivation practices, respectively.

The possible reasons 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 soybean cultivation practices but some constraints might have hindered them to do so, and hence technological gap might have observed.

Technological gap in different components of improved soybean cultivation practices

The average technological gap in adoption of different component of improved soybean cultivation

practices among the soybean growers are summarized in Table- 2.

Table 2 : Average technological gaps in different components of improved soybean cultivation practices n = 120

Sr. No.	Different components of improved soybean cultivation practices	Technological gap (%)	Rank
1	Variety	15.00	X
2	Seed rate	47.50	VI
3	Time of sowing	26.67	IX
4	Spacing	40.42	VIII
5	Application of FYM	61.67	IV
6	Application of basal fertilizer	70.17	II
7	Irrigation	42.64	VII
8	Weeding and inter-culturing	60.22	V
9	Plant protection measures	80.68	I
10	Harvesting	64.17	III
Overall technological gap (Average)		53.58	

It could be inferred from the Table 2 that the highest technological gap was observed in adoption of plant protection measures (80.68 %) and was ranked the first followed by basal fertilizer (70.17 per cent), harvesting (64.17 per cent), with second and third rank, respectively. The practices viz., application of FYM (61.67 per cent) and weeding and inter-culturing (60.22 per cent) were ranked IV and V, respectively. The respondents assigned VI, VII and VIII rank to technological gap in seed rate (47.50 per cent), irrigation (42.64 per cent) and spacing (40.42 per cent), respectively. With regard technological gap, the practices viz., time of sowing (26.67 per cent) and variety (15.00 per cent) was ranked IX and X, respectively.

The overall technological gap combining all the listed ten practices together was 53.58 per cent of the total improved soybean cultivation practices as expressed by the soybean growers.

The possible reason for these might be that majority of the soybean growers were not aware about many practices. Further, due to many reasons like lack of knowledge and technical guidance, lack of finance, high cost of chemical fertilizers and insecticides and shortage of labour were their limitations and hence they could not adopt many improved soybean cultivation practices.

CONCLUSION

The technological gap observed in adoption of improved soybean cultivation practices were of plant protection measures, basal fertilizer, harvesting, application of FYM, weeding and inter-culturing, seed rate, irrigation and spacing. The overall technological gap combining all the listed ten practices together was 53.58 per cent of the total improved soybean cultivation practices as expressed by the soybean growers.

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