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Knowledge of farmers about improved agricultural technologies of green gram crop

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Abstract
Demonstration is very important concept in agricultural extension not only improving farmer explicit knowledge but also tacit knowledge. One of the most important types of demonstration is front line demonstration where, the field demonstrations conducted under the close supervision of scientists of the National Agriculture Research System because the technologies are demonstrated for the first time by the scientists themselves before being fed into the main extension system of the State Department of Agriculture. Indian council of agricultural research, New Delhi has started front line demonstration through Krishi Vigyan Kendras to accelerate the production of crops; Technologies generated by scientist are of no use unless adopted by farmers. The present study was conducted in Bharuch District. Total 100 green gram farmers selected from 10 villages for the study following simple random sampling. The ex-post –facto research design was used for study. The finding revealed that great majority of beneficiary (80.75 per cent) of farmers had high to medium and non-beneficiary (80.35 per cent) of farmers had low to medium level of knowledge about improved agricultural technologies of green gram crop.

Keywords: krishi vigyan kendra, improved technologies, green gram

Introduction

Green gram is an important pulses crop in India and believed to be originated from India. It is short duration legume crop grown mostly as a fallow crop in rotation with rice. Similar to the leguminous pulses, green gram, enriches soil nitrogen content. It is grown mostly in Asian region traditionally while its cultivation has spread to Africa and Americas relatively in the recent times. More than 70%t of world's green gram production comes from India. In India, it is grown an area of 2.98 million hectares with total production of 1.61 million tonnes and productivity of 407 kg/ha (Singh *et al*. 2015) [8] and in Gujarat, it is cultivated in about 2.3 lakh hectares with an annual production of 1.21 lakh tonnes and average productivity of 526 kg /ha (Anonymous, 2015) [1].

Krishi Vigyan Kendra has been functioning in the Bharuch district since 1994.The KVK is sanctioned by the Indian Council of Agricultural Research (ICAR) and implementation by BAIF. The main of Krishi Vigyan Kendra is transfer of technology through on and off campus training programmes for farmer and extension functionaries, Front line demonstration. On farm trails and other extension activities. Front line demonstration is the obligatory activity of Krishi Vigyan Kendra. Krishi Vigyan Kendra has given frontline demonstration on Green gram crop (Meha Variety) to farmers sanctioned by the ZPD, Jodhpur, Therefore knowledge level of beneficiary and non beneficiary farmers about improved agricultural technologies of Green gram crop by Krishi Vigyan Kendra, Chaswad was feel needed to show impact of KVK in the area with following objectives.

1. To study the knowledge level of beneficiary and non beneficiary farmers about improved agricultural technologies of Green gram crop
2. To ascertain relationship between knowledge level and independent variable of beneficiaries and non beneficiaries.

Methodology

The present study was conducted in Bharuch district of south Gujarat region, where maximum number of activities carried out by BAIF Krishi Vigyan Kendra Bharuch. List of the green gram beneficiaries was collected from KVK Bharuch, out of these list 50 beneficiaries was select for present study and the same number of non beneficiaries farmers was select as who are neighbours farmers. Ex-post facto research design was use in the present investigation. The interview schedule was developed keeping in view the specific objective of study with help of research scientist of pulses crop and agronomist of KVK, Bharuch and the data was collected by personal interview.

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Knowledge of the respondents about improved agricultural technologies of Green gram crop was measured by computing the knowledge score. In all statements in respect management practice were prepared with the help of experts from the KVK

and research station. If farmer has given "YES" answer to any sub-questions under the head, the "ONE" score was given and "ZERO" score was given for those who had given "NO" answer.

Table: The respondents were grouped into three levels of knowledge by using mean and standard deviation.

S. No.	Category	Range
1.	Low level knowledge	$\leq \overline{X}$ - S.D.
2.	Medium level knowledge	In between $\overline{X} \pm$ S.D.
3.	High level knowledge	$\geq \overline{X}$ + S.D.

Result and Discussion
Knowledge about improved agricultural technology of green gram crop
Knowledge refer to know –how about different improved agricultural technologies of green gram crop possessed by the farmers. Adequate knowledge is essential to farmers for the

success and profitable cultivation. It was therefore thought necessary to obtain information from the farmers about the knowledge they possessed about improved agricultural technologies of green gram crop. The data about level of knowledge are given in table 1.

Table 1: Distribution of respondent according to their knowledge about improved agricultural technologies of Green gram crop

Level of knowledge	participating Beneficiary (n= 50)		Non participating Beneficiary (n= 50)	
	Number	Percentage	Number	Percentage
Low Level of knowledge (Up to 24)	12	19.25	08	34.20
Medium Level of knowledge (25 to 30)	24	30.50	36	46.15
High Level of knowledge (Above 30)	14	50.25	06	19.65
Total	50	100	50	100

Mean= 41.02
SD=3.47

The analysis of data show that 50.25 per cent of the beneficiary respondents had high level of knowledge about improved agricultural technologies of Green gram crop while, 30.50 per cent of beneficiary respondents had medium level and 19.25 per cent of beneficiary respondents had low level of knowledge about improved agricultural technologies of Green gram crop, respectively.
In case of non beneficiary farmers, 46.15 per cent of the respondents had medium level of knowledge about improved agricultural technologies of Green gram followed by 34.20 per cent and 19.65 per cent of them had low level and high level of knowledge about improved agricultural technologies of Green gram, respectively.
It means this may be perhaps due to positive impact of KVK activities conducted by scientist. The probable reason for above finding might be due to favourable attitude toward various activities carried out by KVK. Frequent contacts with extension agencies, higher mass media exposure and active

involvement in various activities of beneficiary farmers.

Relationship between the selected characteristics of beneficiary and non beneficiary farmers and their level of knowledge
In order to find out the relationship between the selected characteristics of beneficiary and non beneficiary farmers and their level of knowledge about improved agricultural technologies of Green gram green gram crop, correlation was worked out the findings are presented in table 2.
Variable likes Education (0.4735), Extension participation (0.4466) and innovativeness (0.6479) beneficiary farmers were positively highly significant relationship with their knowledge regarding improved agricultural technologies of green gram crop. Moreover, land holding (0.3148) and information sources were positively and significant relationship with knowledge regarding improved agricultural technologies of green gram crop.

Table 2: Relationship between knowledge about improved agricultural technologies of green gram crop and independent variable of beneficiary and non beneficiary farmers

S. No	Variable	Correlation –Coefficient (R-value)	
		Beneficiary (n=50)	Non Beneficiary (n=50)
1	Age	-0.1420NS	-0.0148NS
2	Education	0.4735**	0.2710 NS
3	Landholding	0.3148*	-0.1784NS
4	Income	0.0929NS	-0.0463NS
5	Family size	0.1601 NS	0.2157 NS
6	Social participation	0.1013 NS	0.0706 NS
7	Extension participation	0.4467**	0.3410*
8	Information sources	0.3472*	0.5843**
9	Farming Experience	-0.0983 NS	-0.2032 NS
10	Innovativeness	0.6479**	0.6024**

*Significant at 0.05 level of probability,** Significant at 0.01 level of probability, NS= Non Significant

Income (0.0929), Family size (0.1601) and social participation (0.1013) were positively but non significant with

knowledge level of respondents while, Age (-0.1420) and farming experience (-0.0983) were negatively but non

significant with their knowledge regarding improved agricultural technologies of green gram crop.

The probable reason behinds above finding may be due that eructated and innovative personality farmers also regular participate in extension activities conducted by KVK, Bharuch due to that increase in knowledge and innovative famers further collecting information from different sources which increase their knowledge.

Information sources (0.5843) and innovativeness (0.6024) were positively and highly significant relationship with their knowledge regarding improved agricultural technologies of green gram crop in case of non beneficiary respondents. While, extension participation (0.3410) was positively and significant with their knowledge level of respondents about improved agricultural technologies of green gram crop.

The probable reason may be due to respondents to do something new and also because of huge material available related agriculture through television and use of mobile.

Education (0.2710), family size (0.2157) and social participation (0.0706) were positively but non significant with knowledge level of respondents while, age (-0.0148), landholding (-0.1784), income (-0.0463) and farming experience (-0.2032) were negatively but non significant with their knowledge regarding improved agricultural technologies of green gram crop.

Conclusion

Great majority of beneficiary of respondents had medium to high and non –beneficiary respondents low to medium level of knowledge about improved agricultural technologies of Green gram crop. Innovativeness was highly correlated with knowledge level of respondent in both beneficiary and non – beneficiary, whereas education and extension participation only in case of beneficiaries respondents. Moreover, information sources highly significant in case of non-beneficiary respondents.

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