



Research Article

Knowledge and extent of adoption of farmers regarding recommended agricultural technologies transmitted by KVK

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ARTICLE CHRONICLE :

Received:
09.11.2012;

Revised :
06.03.2013;

Accepted:
04.04.2013

SUMMARY : Present investigation was carried out in Anand district of Gujarat state during 2008-09 to know the level of knowledge and find out extent of adoption of various selected recommended agricultural technologies by beneficiary and non-beneficiary farmers about agricultural technologies. From selected district, Sojitra, Petlad, Anand and Borsad blocks were randomly selected for the study, from each block five villages and from each village 2-22 farmers were randomly selected as respondents. Study concluded that the majority (58.75 %) of the beneficiary farmers and majority (56.25%) of the non-beneficiary farmers had medium level of knowledge about various selected technologies transferred by Krishi Vigyan Kendra, majority (57.50 %) of the beneficiary farmers and majority (55.00%) of the non-beneficiary farmers had medium level of adoption about various selected agricultural technologies transmitted by Krishi Vigyan Kendra.

How to cite this article : Sai, Dhaneshwar, Patel, B.B. and Verma, Lekh Ram (2013). Knowledge and extent of adoption of farmers regarding recommended agricultural technologies transmitted by KVK. *Agric. Update*, 8(1&2): 156-159.

KEY WORDS:

Knowledge, Extent of adoption, KVK

BACKGROUND AND OBJECTIVES

The low productivity of agriculture has generally been attributed to traditional methods of farming in adequacy of resources and lack of required technical know-how. It has also been recognized that if, progress has to be achieved in agriculture production, the farmers have to adopt improved methods of farming.

Knowledge is one of the important components of behaviour, which plays a major role in overt and covert behaviour of an individual. In fact, knowledge influences the intellectual phase of human behaviour both with favourable and unfavourable responses and advanced knowledge is essential for adoption of improved technology.

The most of the programmes of agriculture and rural development have been concerned with only a few aspects of agricultural situation. Some States Agricultural Universities (SAUs) have already taken the initiative for the 'Integrated Area Development in Agriculture' for transferring agricultural technology from research stations to the farmers' field.

Appropriate training to the farmers, extension personnel, agriculture officers and trainers is very crucial to increase agricultural production. This aspect has drawn the attention of various educational institutions to varying degrees. In spite of all efforts, the farmers training programmes did not come at desired level. Realizing this importance, a number of production oriented research and extension schemes have been launched from time to time to raise the agricultural production in each of the five-year plans. There is a need for the transfer of improved agricultural technology from research station to the farmer's field. To provide vocational education in agriculture and allied fields at the pre and post-matriculate to cater to the training needs of a large number of boys and girls coming from rural area and further suggested that such institutions be named as "Agricultural Polytechnics". The recommendation was thoroughly discussed during 1966-72 associating the Ministry of Education, Ministry of Agriculture, Planning Commission, Indian Council of Agricultural Research and other allied institutions, finally the

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ICAR mooted the idea of establishing Krishi Vigyan Kendra (Farm Science Centre) as innovative institution for imparting vocational training to the farmers and field level extension functionaries. The ICAR, therefore, constituted a committee in 1973 headed by Dr. Mohan Singh Mehta of Sevamandir, Udaipur (Rajasthan) for working out a detailed plan for implementing the scheme. The committee submitted its report in 1974. After the submission of this report the first KVK was established in 1974 at Pondicherry under the administrative control of the Tamil Nadu Agricultural University, Coimbatore. The KVK are being established in each district of the states in order to serve the poorest of the poor. Rajasthan is pioneer state in which first KVK was started at Fatehpur (Shekhawati) in Sikar district in the year 1976. Now, a network of 550 KVKs has been established till the March, 2007 in the country.

At present a total of twenty-five KVKs are working in Gujarat state, out of which thirteen KVKs are working under the administrative control of Agricultural Universities, eleven KVKs are working under Non-Government Organizations (NGOs) and one is under ICAR. Krishi Vigyan Kendra at Devataj in the district of Anand was established on 20th November, 1985 under the administrative control of agricultural university. Anand is an important district of Middle Gujarat. About 70.00 per cent of the total working population of the district is engaged in agriculture and allied occupation. The main aim of establishing the KVK was to bring out improvement in their production and economy in the district. In order to achieve this objective the KVK, Devataj carry out a number of training programmes and various activities on crop production and allied fields.

RESOURCES AND METHODS

The investigation was carried out in Anand district of Gujarat state during 2008-09 to know the level of knowledge and to find out extent of adoption of various selected recommended agricultural technologies by the beneficiary farmers and non-beneficiary farmers transmitted by KVK. Anand district is composed of eight talukas, out of which, four talukas viz., Sojitra, Petlad, Anand and Borsad were selected for the study. Sojitra and Petlad have maximum activities about crop production and allied fields were carried out by Krishi Vigyan Kendra (Devataj), so from their beneficiaries respondents were selected and Anand and Borsad blocks had no any activities during 2006-07 by KVK, from their non-beneficiaries respondents were selected at random. From each selected block five villages and from each village 2-22 respondents were selected as respondents, total 160 respondents were interviewed personally through well-structured pre tested interview schedule. The researcher personally met with the respondents and explained to them about the purpose of the study to build the rapport. Data were recorded in interview schedule and analyzed to use appropriate

statistical methods viz. mean, frequency, percentage, standard deviation and coefficient correlation for the interpretation.

To determine the level of knowledge of the respondents towards various agricultural technologies transferred through the KVK, a schedule was constructed for this study. Schedule consisted of 15 major practices pertaining to castor crop production and allied fields. Responses of the respondents about each practice were recorded. Therefore, possible maximum score for knowledge one could obtain was 15 and minimum zero.

All the respondents were grouped into three categories as under on the basis of mean and standard deviation.

To obtain the extent of adoption of various activities

Sr. No.	Category	Score
1.	Low level of knowledge	$< \bar{X} - S.D.$
2.	Medium level of knowledge	In between $\bar{X} \pm S.D.$
3.	High level of knowledge	$> \bar{X} + S.D.$

transmitted by KVK, the schedule was developed for this study. The schedule of 21 major practices pertaining to castor crop production and allied fields. Responses of the respondents about each practice were recorded into one score. Therefore, possible maximum score for adoption, one could obtain was 21 and minimum zero. The respondents adoption level was determined by calculating adoption quotient based on formula developed by Sengupta (1976).

$$\text{Adoption quotient (A.Q.)} = \frac{\text{Number of practices used}}{\text{Number of applicable practices}} \times 100$$

The adoption quotient was calculated for every respondent. Later on, all the respondents were classified into three categories on the basis of mean (\bar{X}) and standard deviation (S.D.).

Sr. No.	Category	Score
1.	Low level of adoption	$< \bar{X} - S.D.$
2.	Medium level of adoption	In between $\bar{X} \pm S.D.$
3.	High level of adoption	$> \bar{X} + S.D.$

OBSERVATIONS AND ANALYSIS

The results of the present study as well as relevant discussion have been summarized under following heads:

Level of knowledge of beneficiary and non-beneficiary farmers about recommended agricultural technology transmitted by KVK:

The data presented in Table 1 portray that that the

majority (58.75 %) of the beneficiary farmers had medium level of knowledge about various selected technologies transferred by KVK followed by 30.00 per cent with high and 11.25 per cent low level of knowledge about various selected agricultural technologies transferred by KVK. while, majority (56.25 %) of the non-beneficiary farmers had medium level of knowledge, followed by 26.25 per cent and 17.50 per cent of non-beneficiary farmers had low and high level of knowledge about various selected agricultural technologies transferred by KVK, respectively. The foregoing discussion pointed out that the majority (88.75 %) of the beneficiary farmers had medium to high level of knowledge regarding various selected agricultural technologies transferred by KVK. This finding is similar to

the findings of More *et al.* (2006), Patel (2004) and Diwan (2007).

Extent of adoption of various selected recommended agricultural technologies transmitted by KVK:

A perusal of Table 2 reveals that the majority (57.50 %) of the beneficiary farmers had medium level of adoption about various selected agricultural technologies transmitted by KVK followed by 27.50 per cent with high extent of adoption and 15.00 with low extent of adoption about various selected agricultural technologies transmitted by KVK. Whereas, majority (55.00 %) of the non-beneficiary farmers had medium extent of adoption followed by 23.75 per cent and 21.25 per

Table 1 : Distribution of respondents according to their level of knowledge

Sr. No.	Level of knowledge	Frequency of respondents			
		Beneficiary farmers		Non-beneficiary farmers	
		Frequency	Percentage	Frequency	Percentage
1.	Low	09	11.25	21	26.25
2.	Medium	47	58.75	45	56.25
3.	High	24	30.00	14	17.50
	Total	80	100.00	80	100.00

Table 2 : Distribution of respondents according to their extent of adoption

Sr. No.	Level of adoption	Frequency of respondents			
		Beneficiary farmers		Non-beneficiary farmers	
		Frequency	Percentage	Frequency	Percentage
1.	Low	12	15.00	19	23.75
2.	Medium	46	57.50	44	55.00
3.	High	22	27.50	17	21.25
	Total	80	100.00	80	100.00

Table 3 : Relationship between characteristics of the beneficiary farmers and their extent of adoption regarding KVK activities

Sr. No.	Independent variables	Coefficient of correlation ('r' value)
1.	Age	-0.228 *
2.	Education	0.334 **
3.	Caste	0.246 *
4.	Type of family	-0.097 NS
5.	Size of family	0.064 NS
6.	Socio-economic status	0.297 **
7.	Occupation	0.353 **
8.	Size of land holding	0.342 **
9.	Annual income	0.338 **
10.	Risk preference	0.307 **
11.	Achievement motivation	0.305 **
12.	Scientific orientation	0.331 **
13.	Innovativeness	0.389 **
14.	Knowledge	0.325 **
15.	Attitude	0.584 **
16.	Cosmopolite-localite	0.592 **
17.	Extension contact	0.653 **

* and ** indicate significance of values at P=0.05 and 0.01, respectively

cent with low and high extent of adoption about various selected agricultural technologies transmitted by KVK, respectively.

It can be concluded that the majority (85.00 %) of the beneficiary farmers had medium to high level of adoption. This finding derives support from the findings of Jondhale *et al.* (2000), Soni (2005) Waman and Girase (2005) and Rabari (2006).

Relationship between selected independent variables of beneficiary farmers and their extent of adoption towards various activities of KVK:

The Table 3 shows the relationship between the independent variables and extent of adoption of selected agricultural practices recommended by KVK, it is obvious from the table variables education, socio-economic status, occupation, size of land holding, annual income, risk preference, achievement motivation, scientific orientation, innovativeness, knowledge, attitude, cosmopolite-localite and extension contact had highly positively significant relation, whereas variable age had negatively significant and variable caste had positive significant relation, while the variable type of family and size of family had no relationship between the extent of adoption and selected recommended agricultural practices by KVK.

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