

Emerging trends in adoption of home science technologies as perceived by farm women

■ SHOBHANA GUPTA AND SHILPI VERMA

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See end of the paper for authors' affiliations

Correspondence to :

SHOBHANA GUPTA
Rajmata Vijayaraje Scindia
Krishi Vishwa Vidyalaya,
GWALIOR (M.P.) INDIA

■ **ABSTRACT** : The study focuses on constraints affecting the adoption and transfer of home science technologies disseminated by the Krishi Vigyan Kendra (KVK) unit of CAZRI, Jodhpur to its women clientele. The study also ascertained the awareness and adoption levels of such introduced technologies. Majority of the respondents held favourable attitude towards the activities of KVK. Most of them have adopted the recommended home science technology. The study also identified factors responsible for the non-adoption of women farmers' related technologies. The three highest ranking constraining factors were revealed as; "Lack of resources and inputs", "Specialists are being used more as journalist than extension personnel" and "Lack of motivation". Reasons have been proffered for the relatively low technologies' adoption levels. Recommendations have also been made to enhance the technology adoption level. These include the necessity to introduce only socio- economically and culturally compatible technologies to KVK clientele, a wholesale focus on follow-up activities after initial group based technology introduction activities, and the attachment of a credit scheme to the KVK programme.

■ **KEY WORDS** : Constraints, Adoption, Attitude, Transfer of technology

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Agriculture constitutes a large share of national output and employs a majority of the labour force in most developing countries, hence, the sector has been integrated into any thinking about development (World Bank, 2003). Technical change is the engine of long-term growth and it becomes technically important through diffusion. This is more so for agricultural production, where the prospect of enhanced production offered by improved agricultural technologies is recognized, according to the World Food Programme, as essential to improving the household food security of small scale farmers, raising rural incomes and creating national surplus that can improve the basis for economic growth.

Women are the key farmers, food producers and natural resource managers. This is because they provide 65 - 89 per cent of food, provide nearly half of farm labour, shoulder over 90 per cent of domestic responsibilities and work twice as many hours as men. Despite all these contributions,

women are still restricted in their roles as farmers by unequal rights and unequal access to and control over resources, especially land. Women also carry out their work without much help from agricultural support mechanisms such as extension agencies, input suppliers and credit institutions.

The Krishi Vigyan Kendra (KVK) was instituted in 1974 to address specific agricultural problems. Apart from agriculture the focus is also on food nutrition, processing, storage and utilization of crop and livestock produce, in order to raise women's income and living standards through business oriented farming and processing strategies. Ever since the introduction of the KVK programme in India, and with the current emphasis on participatory extension, various efforts have been made to elicit various types and levels of information on the activities and effectiveness of the programme.

Development and adoption of improved technologies play an important role in improving the productivity and

welfare of the limited resource farmers especially in low income-countries. In India, transition of small farmers from producing staple crops to high value crops is still slow due to various socio-cultural and economic factors. There is a wide gap between agricultural technologies developed at research institutions and its adoption by small-scale farmers and rural households (Kroma, 2003). Lambe *et al.* (1998) observed that in spite of developing a number of agricultural engineering technologies, the proportion of its adoption appear to be meagre. Gamon *et al.* (1994) noticed that adoption of sustainable agriculture is determined by the attributes *i.e.*, relative advantage, compatibility and observability. It is also experienced that often technologies offered for extension do not fit in farmers' contexts, and are perceived as irrelevant.

The study is designed to measure attitude and constraints perceived by farm women in adopting new technology. In the era of technological department, Home science technology is advancing at high speed. The progress in any field depends to a large extent on quick and effective dissemination of new practices among the beneficiaries and bring back of their problems to the research labs for their solution. Extension programmes depend on the ability and expertise of the extension staff to ensure, deliver and direct a speedy flow of information to the farmers and farm women at the right time in the appropriate manner.

Home science technology which was said to be static a few years ago has been realized as the most dynamic force to revitalize the country's economy and make the country self-sufficient. The Krishi Vigyan Kendra is rightly receiving and the facing the challenge.

Keeping this consideration in mind, the specific objectives of the study were formulated to identify the various constraints experienced by farm women in adoption of recommended technologies.

■ RESEARCH METHODS

The study was conducted in the KVK hosted by CAZRI, Jodhpur. The accessible population for this descriptive study was ninety (N=90). Random sampling technique was applied to draw the samples of 90 women farmers from three villages of three each Panchayat Samitis (Jodhpur district). Data were solicited by personal interview method with the help of structured schedule. A Likert-type scale was developed to assess the constraints in adoption of modern technologies. The scale consisted of 38 items. The responses were obtained on five-point continuum ranging from 'strongly agree' to 'strongly disagree' basis with the weights of numerical values from five to one. For evaluating the responses, high and low groups of the individual statements, the critical ratio value was worked out by using the formula and procedure given by Edwards (1957). The reliability of the scale was determined by using split halves method. Data

were analyzed using standard statistical methods.

Selection of home science technologies:

A list of home science technologies which are generally diffused by KVK was taken and the following five technologies were selected randomly for evaluation in the study for assessing the adoption and constraints:

- Supplementary food and balanced diet.
- Improvement in local diet by different methods such as mixing, sprouting etc.
- Smokeless Chullah.
- Improvement in existing storage bins for safe grain storage.
- Immunization of children and pregnant ladies.

■ RESEARCH FINDINGS AND DISCUSSION

The results of the present study as well as relevant discussions have been presented under following sub heads:

Attitude of farm women towards various activities of KVK:

The researchers took thirty eight items to ascertain their attitude towards each of them but finally only twenty four items were retained, out of which twelve items were kept negative while remaining twelve were set positive. The ranks of all these items were determined on the basis of mean score obtained by summing up the score of each respondent for a particular statement and divided by the total number of respondents. The pooled mean score came out to be 3.58 which were quite high. This clearly indicates that in general, the attitude exposed by the respondents were more favourable towards the KVK activities. (Table 1) .

It was seen that majority of the respondents held favorable attitude towards the activities. This might be due to the fact that subject matter specialist had regularly kept in touch with them to provide them the latest home science technology. Majority of farm women have adopted the recommended technology. This might be one of the reasons of their favourable attitude towards the programme.

Items included in table 1 showed that the mean score values varied between the range 2.66 to 4.22. This depicts favorable to strongly favorable attitude. It was concluded that the KVK activities were able to convince the farm women in adoption of improved home science practices as majority of them had a favourable to strongly favourable attitude towards these activities.

From Table 1, it also came out that most of the respondents strongly agreed to positive statements while their responses towards negative statements were of disagreement. This also indicates positive attitude towards the KVK activities.

It may, thus, be envisaged that on the whole the farm women under study had significantly positive attitude towards

Table 1 : Attitude of farm women towards various activities of KVK

Sr. No.	Attitudinal statement	SA	A	UD	DA	SDA	Mean Score	Rank order
1.	The KVK keeps abreast you with the latest technological changes.	10	25	20	25	10	3.00	IX
2.	The KVK does not keep you abreast with the latest technological changes.	30	40	10	5	0	4.11	III
3.	The KVK is helpful in raising your nutritional and health status.	25	50	10	5	0	4.05	IV
4.	The KVK is not helpful in raising your nutritional and health status.	30	20	0	10	30	3.1	VIII
5.	The demonstrations conducted by KVK are useful in motivating the farm women towards improved home science practices.	35	45	5	5	0	4.22	I
6.	The demonstrations conducted by KVK are not useful in motivating the farm women towards the improved home science practices.	10	20	10	30	20	2.66	XI
7.	The subject matter information regarding vaccination given in the training programme is adequate.	35	45	5	5	0	4.22	I
8.	The subject matter information regarding vaccination given in the training programme is not adequate.	10	20	10	30	20	2.66	XI
9.	The training helps you in developing confidence in your work.	40	20	15	10	5	3.88	V
10.	The training does not help you in developing confidence in your work.	20	15	30	15	10	3.22	VII
11.	The training period is sufficient to cover all the activities of KVK.	45	30	5	5	5	4.16	II
12.	The training period is not sufficient to cover all the activities of KVK.	10	15	25	20	20	2.72	X
13.	The trainers have enough knowledge of subject matter	40	20	15	10	5	3.88	V
14.	The trainers do not have enough knowledge of subject matter.	20	15	30	15	10	3.22	VII
15.	The duration gap between two trainings is adequate.	30	20	10	20	10	3.44	VI
16.	The duration gap between two trainings is inadequate.	10	20	10	30	20	2.66	XI
17.	The place of training is suitable.	10	25	20	25	10	3.00	IX
18.	The place of training is not suitable.	30	45	10	5	0	4.11	III
19.	The training period is sufficient to cover all the information fields.	30	20	10	20	10	3.44	VI
20.	The training period is not sufficient to cover all the information fields.	10	15	20	20	20	2.72	X
21.	All the recommendations given in the training are profitable.	25	50	10	5	0	4.05	IV
22.	All the recommendations given in the training are not profitable.	30	20	0	10	30	3.11	VIII
23.	Farm women training programme organized by KVK provides you practical knowledge about the new home science techniques.	45	30	5	5	5	4.16	II
24.	Farm women training programme organized by KVK does not provides you practical knowledge about the new home science techniques.	10	15	25	20	20	2.72	X

SA- Strongly agree, A- Agree, UD- Undecided, DA- Disagree, SDA- Strongly disagree

Table 2 : Constraints in effective implementation of KVK programme as perceived by farm women

(n=90)

Sr.No.	Type of constraint	Number of responses	Percentage of responses	Rank position
1.	Lack of interpersonal relationships	35	38.88	VII
2.	Inadequate technologies suited to the farm women's conditions	25	27.77	IX
3.	Lack of transport facilities	15	16.66	X
4.	Lack of resources and inputs with farm women	65	72.22	I
5.	Lack of motivation among the farm women	55	11.11	III
6.	Lack of incentives and recognition to the scientists	10	11.11	XI
7.	Lack of leadership at KVK	40	44.44	VI
8.	Lack of training facilities at KVK	30	33.33	VIII
9.	Specialists being used more as a journalist than extension personnel	60	66.66	II
10.	Paucity of funds for extension work	45	50.00	V
11.	More emphasis on table work	50	55.55	IV
12.	Political interference	3	0	XII

the KVK activities.

The present results findings are in line with the findings of Das and Sarkar (1970) who reported that majority of the farmers had favourable attitude towards improved farm practices. Similar findings have also been reported by Kher and Jha (1978).

Constraints in effective implementation of the programmes of KVK as perceived by farm women:

The data in Table 2 present the constraints in effective implementation of the programmes of KVK as perceived by farm women. Their responses were recorded against twelve aspects.

It is evident from Table 2 that “Lack resources and input” was ranked first important constraint by the farm women in implementation of KVK programmes effectively. The next important constraint seemed to be “Specialist being used more as a journalist than as extension personnel”, followed by “Lack of motivation” as third most important constraint. The other important constraints were ranked in the order as – “More emphasis on table work” (55.5%), “Paucity of funds” (50%), “Lack of leadership” (44.4%), “Lack of interpersonal relationship” (38.8%), “Lack of training facilities” (33.3%), “Inadequate technology suited to the farm women’s conditions” (27.7%), “Lack of transport facilities” (16.6%), “Lack of incentives and recognition to scientist” (11.1%), and “Political interference” (0%).

From the findings mentioned in Table 2, it can be said that due to lack of resources, inputs, motivation and recognition, the farm women do not participate in the effective implementation of KVK programmes. Lack of interpersonal relationships coupled with lack of transport and training facilities, lack or leadership and emphasis on table work lead to ineffective programme implementation.

The findings are in line with the results of Patel (1991) and Sharma (1983) who found that lack of proper implementation of programme, lack of awareness, no active participation of local people and lack of technical guidance are the important constraints in effective implementation of a programme.

Conclusion:

The study revealed that majority of the respondents held favourable attitude towards the activities of KVK. Most of them have adopted the recommended home science technology. It was concluded from the findings of the study that KVK activities are able to convince the farm women towards adoption of improved practices. This might be due to the fact that Subject

Matter Specialists had been regularly in touch with them to provide them the latest home science technology.

As perceived by the farm women the constraints coming in way of effective implementation of the programme showed that “Lack of resources and inputs” was ranked first followed by “Specialists are being used more as journalist than extension personnel” and “Lack of motivation” as major constraints in the effective implementation of KVK activities. Emphasis should be given to educate the farm women by organizing at least two or more effective demonstrations on the technology to be transferred following by one to two days training camps. More training camps should be organized for various categories of farm women in the villages. Advisory services should be provided promptly and village camps should be arranged frequently. The follow up programmes should be made in the left over villages.

Authors’ affiliations:

SHILPI VERMA, Krishi Vigyan Kendra, NEEMUCH (M.P.) INDIA

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