



IMPACT OF KVK IN DOUBLING FARMERS INCOME IN SITAPUR DISTRICT OF UTTAR PRADESH

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Abstract: More than half of Indian population were engaged in agricultural sector but the available technology doesn't ensure food security of the country. Hence, to diffuse new agricultural invention and innovation in the farming community, there arises a need for effective medium for transfer of technology. Thus, KVK bridges the gap between the technology generation and dissemination. The present study was proposed to understand the impact of KVK in doubling farmers income to formulate suitable programmes. For the study, descriptive research design was adopted. 120 respondents from Biswan taluk of Sitapur district of Uttar Pradesh were selected as respondents. Primary data collected from respondents and secondary data from available literatures. The findings revealed that majority of the respondents were middle aged, illiterate, upto 5 members in their family, medium level of annual income, possesses their own land, agriculture as their main occupation, medium level of mass media exposure, office bearer in one organization, high level of extension contact. Meanwhile, more than half of the respondents had reported medium level of impact towards the activities carried out by KVK, beneficiary selection is not unbiased is a major constraint suggested that maximum emphasis should be given on learning by doing.

Keywords: *KVK, Sitapur, Doubling farmer's income, Agricultural innovation, Impact*



Introduction

An agricultural invention and innovation continuum in all facets of agriculture and allied activities with its effective diffusion is key to sustainable increase in the productivity with environment sustainability. With half of the workforce engaged in agricultural sector in India, the role of science and technology in agriculture is not only to ensure food security of the country, but also to provide farmers a competitive edge and to maintain affordability of the food items for the public, at large. Modernization of agriculture greatly depends on development of farm and its dissemination. A large number of agricultural technologies are available, but full use of it is not being done in many parts of the country. Thus, there is a big gap in the technology generation and dissemination.

The transfer of farm technology is mainly by the State Department of Agriculture and State Universities through Krishi Vigyan Kendras (KVKs). The KVKs are evolving as the future grass root level institutions for empowering the farming community. KVKs have made dent and have become part of decentralized planning to achieve desired level of growth in agriculture and allied sector. They serve as the light house for rapid agricultural and rural development and act as link between agricultural universities, research institutes and farmers. KVKs play a vital role in conducting On Farm Testing to demonstrate location specific agricultural technologies. Also KVKs conduct demonstrations to prove the potential of crops at farmers' fields. KVKs also conduct need based training programmes for the benefit of farmers and farm women, rural youths.

KVKs are creating awareness about improved agricultural technologies through large number of extension programmes. Critical and quality inputs like seeds, planting materials, organic products, biofertilizers and livestock, piglet and poultry strains are produced by the KVKs and made available to the farmers. The aim of KVK is to reduce the time lag between generation of technology at the research institution and transfer to farmer's fields for increasing



production, productivity and income from agriculture and allied sectors. “Teaching by doing and learning by doing” are main method of imparting skill training. KVK’s have been considered as the most important extension centers to transfer the technology from research station to the farmer’s field and therefore, the government has initiated the process of establishing two KVK in each district.

The first KVK in Rajasthan was Bharatiya Krishi Vigyan Kendra, established at Fatehpur Shekhawati of district Sikar in 1976 under the administrative control of M.L. Sukhadia University, Udaipur and 42 more KVKs are working in the state. In each KVK, Senior Scientist cum Head is posted along with six Subject Matter Specialists of Horticulture, Agronomy, Animal Husbandry, Extension Education, Plant Protection and Home Science. Three Programme Assistants and six other ministerial and supporting staff are provided to each KVK making a total of 16 in all. The mandate of KVK is Technology Assessment and Demonstration for its Application and Capacity Development.

In the present context ,the agricultural development for income enhancement of the farming community mostly depends on upto date knowledge embedded information led by technological interventions, capacity building and entrepreneurship development .The rural farmers in different disadvantaged areas of our country are facing challenge of knowledge embedded information scarcity and the skill to apply that knowledge in their own situation for enhancing their income. To make the agriculture society more knowledge vibrant and information enriched and income resilient ,the KVK led agricultural advisory services for income augmentation may be used as the situation specific solution for the sustainable livelihood of rural peasants .There is need to explore the Role of KVK for doubling farmers income.

Dubey (2008) found that KVK was able to bring about significant changes in socio-economic status as well as the level of knowledge among different categories of trainees. Training and guidance given to trainees have played prime role in influencing technological



change besides management orientation. The exposure of KVK training programme significantly changed the attitude of farmers in the desired direction which one could easily expect. Ahmad *et al.*, (2012) stated that KVKs transfer of technology programme had contributed immensely in increasing productivity of farm enterprise but have very little impact on generating gainful employment for the farmers. This clearly reflects that KVKs need to orient its effort for entrepreneurship development among farming community so that farmers /trainees are not only self-employed but also created opportunity for unemployed others.

Gupta and Verma (2013) stated that 77.7% respondents showed that KVK made an impact in the villages where it functions some activities conducted by KVK like demonstrations, training camps and exhibitions, had great to moderate impact on the respondents. Behera *et al.* (2014) found that KVK, Koraput was playing a vital role in disseminating the improved crop production technology and helps in increasing the crop yield. The technology transferred is also profitable and acceptable to the farming community. Further research need to be focussed on the problems and the constraint for adoption of the technology. Bar (2015) observed that the socio-economic attributes of the respondents had not much influence in increasing their knowledge level. Hence, KVK have to organise more need based training programmes to enrich knowledge and skill competency of the tribal farmers to adopt the changed practices for more production and income for their sustainable livelihood.

Patelet *al.* (2016) stated that government officials should be more acquainted to social system to improve their rapport among farmers and furnish their extension task effectively. Ponnusamy and Devi (2017) found that the adoption of multiple farm enterprises in an integrated manner could ensure a substantial income generation to sustain the livelihood of farmers over the meagre income from self-standing enterprises as revealed from this study. Veeresh and Hosmani (2017) found that after the KVK intervention there was a significant change in socio-economic status of beneficiaries and shift from low and medium socio-economic status to high socio-economic status. Farmers are benefiting and realizing sufficient income throughout the year with



these interventions. Bai (2018) found that extension programme such as OFT/FLD, capacity building and various extension programme conducted by KVK and large-scale demonstration by NGO proved well in dissemination of knowledge about new fodder variety.

Statement of the problem

Indian agriculture is a complex entrepreneurship system. In one side it is commercially as competitive as international market, however in other side the direct benefit share of farmers in the profit chain is very meagre. In any case, deeply enrooted middlemen system cuts the maximum profit share under unrestricted political influence which pays, sometimes less than the production cost of farmers. The study analyzes the problems of lower farmer income. In this context, the following objectives of the study were framed;

- 1) To find out the socio-economic and personal characteristics of the respondents.
- 2) To find out the impact of the activities carried out by KVK.
- 3) To identify the constraints which hinder income enhancement and suggest possible mitigation.

Methodology

For the present study, descriptive research design was adopted. In Uttar Pradesh, Sitapur district is purposively selected since it has KVK and farmers were actively participating in Sitapur KVK. In Sitapur district of Uttar Pradesh, Biswan taluk has been selected because there are abundance of Sitapur KVK farmers beneficiaries and these beneficiaries remain mostly attached with Sitapur KVK activities like front line demonstration ,vocational training etc. In Biswan taluk of Sitapur district in Uttar Pradesh, 6 villages were selected. The selected villages were Aalampur, Banihar, Belhari, Chelwara, Dewai and Ganeshpur. From each village, 20 farmers were selected. Thus, 120 farmers were selected from the selected six villages and forms the respondents of the study. Primary data were gathered with the help of pre-tested interview schedule from the respondents and secondary data from previous studies, literatures. The data gathered were subjected to statistical analysis and the results were presented.



Results and Discussion

The socio-economic profile of the respondents were studied under various characteristics and the results were presented under table.1.

Table.1. Socio-economic profile of the respondents (n=120)

S. No.	Characteristics	Category	Frequency	Percentage
1	Age (in years)	Young (<35)	37	30.83
		Middle(36-55)	54	45.00
		Old (>55)	29	24.17
2	Education	Illiterate	32	26.67
		Can read only	11	9.17
		Can read and write	17	14.17
		Primary school	25	20.83
		Middle school	7	5.83
		High school	19	15.83
		Graduate	9	7.50
3	Annual Income	Low	27	22.50
		Medium	61	50.83
		High	32	26.67
4	Land holding	1. Homestead land		
		a. Own land	47	39.17
		b. Share cropping	32	26.67
		2. Effective land holding	41	34.17
5	Family size	Upto 5 members	79	65.83
		Above 5 members	41	34.17
6	Occupation	Agriculture	73	60.83
		Agriculture + labour	47	39.17
7	Mass media exposure	Low	31	25.83
		Medium	65	54.17
		High	24	20.00
8	Extension contact	No membership	21	17.50
		Membership in one organization	25	20.83



		Membership in more than one organization	19	15.83
		Office bearer in one organization	27	22.50
		Office bearer in more than one organization	23	19.17
		Distinctive feature (MLA and MP)	5	4.17
9	Extension contact	Low	24	20.00
		Medium	42	35.00
		High	54	45.00

From table.1, it can be learnt that majority of the respondents were middle aged (45%), followed by young age (30.83%) and old age (24.17%). Most of the respondents were illiterate (26.67%), followed by primary (20.83%), high school (15.83%), can read and write (14.17%), can read only (9.17%), graduate (7.50%) and middle school (5.83%). Higher percentage of the respondents had upto 5 members in their family (65.83%), followed by above 5 members in their family (34.17%). Half of the respondents had medium level of annual income (50.83%), followed by high (26.67%) and low (22.50%) level of annual income. Most of the respondents had own land (39.17%), followed by effective land holding (34.17%) and only 26.67 per cent of the respondents had share cropping.

Most of the respondents had agriculture as their main occupation (60.83%) and remaining 39.17 per cent of the respondents had agriculture and labor as their main occupation. More than half of the respondents (54.17%) had medium level of mass media exposure, followed by 25.83 per cent of respondents had low level and 20 per cent of respondents had high level of mass media exposure. Majority of the respondents were office bearer in one organization (22.50%), followed by membership in one organization (20.83%), office bearer in more than one organization (19.17%), no membership (17.50%), membership in more than one organization (15.83%) and distinctive feature (MLA and MP) as (4.17%). Higher percentage of respondents



had high level of extension contact (45%), followed by medium (35%) and low (20%) level of extension contact (20%).

Impact of activities carried out by KVK were listed and presented in table.2.

Table.2. Impact of activities carried out by KVK

S. No.	Activities of KVK	Response					
		Improved		Not improved		Not sure	
		<i>F</i>	%	<i>f</i>	%	<i>F</i>	%
1	Vocational training provided by KVK	28	23.33	76	63.33	16	13.33
2	KVK plays vital role in the transfer of technology	45	37.50	47	39.17	28	23.33
3	Training provided for adopting improved practices	54	45.00	24	20.00	42	35.00
4	Soil testing	30	25.00	76	63.33	14	11.67
5	Frontline demonstration performed by KVK	58	48.33	7	5.84	55	45.83
6	KVK provides advisory services about marketing, climate etc .	45	37.50	54	45.00	21	17.50
7	KVK creates awareness about various schemes	33	27.50	72	60.00	15	12.50
8	Farmer Producer Organization	34	28.33	63	52.50	23	19.16
9	Biofertilizers	23	19.16	91	75.83	6	5.00
10	Organic farming	45	37.50	56	46.67	19	15.83
11	Vermicompost	36	30.00	73	60.83	11	9.17
12	Value addition products and marketing	38	31.66	54	45.00	28	23.33
13	Proper fertilizer and nutrient management	39	32.50	61	50.83	20	16.66
14	Kisan Goshti	52	43.33	53	44.17	15	12.50
15	Pest and disease management	45	37.50	54	45.00	21	17.50



From table.2, it can be interpreted that 23.33 per cent, 63.33 per cent and 13.33 per cent of respondents reported vocational training provided by KVK had improved, not improved and not sure about the impact of KVK activities. 37.50 per cent, 39.17 per cent and 23.33 per cent of respondents reported KVK plays vital role in the transfer of technology had improved, not improved and not sure about the impact of KVK activities. 45 per cent, 20 per cent and 35 per cent of respondents reported training provided for adopting improved practices had improved, not improved and not sure about the impact of KVK activities. 25 per cent, 63.33 per cent and 11.67 per cent of respondents reported soil testing had improved, not improved and not sure about the impact of KVK activities.

Meanwhile, 48.33 per cent, 5.84 per cent and 45.83 per cent of respondents reported frontline demonstration performed by KVK had improved, not improved and not sure about the impact of KVK activities. 37.50 per cent, 45 per cent and 17.50 per cent of respondents reported KVK provides advisory services about marketing, climate, etc. had improved, not improved and not sure about the impact of KVK activities. 27.50 per cent, 60 per cent and 12.50 per cent of respondents reported KVK creates awareness about various schemes had improved, not improved and not sure about the impact of KVK activities. 28.33 per cent, 52.50 per cent and 19.16 per cent of respondents reported Farmer Producer Organization had improved, not improved and not sure about the impact of KVK activities.

Similarly, 19.16 per cent, 75.83 per cent and 5.00 per cent of respondents reported biofertilizers had improved, not improved and not sure about the impact of KVK activities. 37.50 per cent, 46.67 per cent and 15.83 per cent of respondents reported organic farming had improved, not improved and not sure about the impact of KVK activities. 30 per cent, 60.83 per cent and 9.17 per cent of respondents reported vermicompost had improved, not improved and not sure about the impact of KVK activities. 31.67 per cent, 45.00 per cent and 23.33 per cent of respondents reported value addition products and marketing had improved, not improved and not sure about the impact of KVK activities.



Eventually, 32.50 per cent, 50.83 per cent and 16.67 per cent of respondents reported proper fertilizer and nutrient management had improved, not improved and not sure about the impact of KVK activities. 43.33 per cent, 44.17 per cent and 12.50 per cent of respondents reported Kisan Goshti had improved, not improved and not sure about the impact of KVK activities. 37.50 per cent, 45.00 per cent and 17.50 per cent of respondents reported pest and disease management had improved, not improved and not sure about the impact of KVK activities.

The overall impact of activities carried out by KVK was categorized and presented in table.3.

Table.3. Overall impact of activities carried out by KVK

(n=120)

S. No.	Category	Frequency	Per cent
1	Low	21	17.50
2	Medium	62	51.67
3	High	37	30.83
Total		120	100.00

From table.3, it can be seen that more than half of the respondents had reported medium level of impact (51.67%), followed by high (30.83%) and low (17.50%) level of impact towards the activities carried out by KVK.

The constraints experienced by the respondents which hinder income enhancement were listed and presented in table.4.



Table.4. Constraints that hinder income enhancement

(n=120*)

S. No.	Constraints	Response		
		Frequency	Percentage	Ranking
1	Duration of training is not appropriate.	45	37.50	VII
2	Course content of training are not related too much with felt needs	54	45.00	V
3	The timings of the training is not suitable	89	74.17	II
4	Less provision for learning by doing	29	24.17	VIII
5	Over loaded information (too much information is short time)	48	40.00	VI
6	Absence of field visit on successful demonstration during training	86	71.67	III
7	Less time for group discussion	21	17.50	IX
8	Improper use of A.V aids	15	12.50	X
9	Location of FLD and OFT are not well thought of.	72	60.00	IV
10	Selection of beneficiary is not unbiased.	116	96.67	I

(*-Multiple responses recorded)

From table.4, it can be seen that beneficiary selection is not unbiased (96.67%) secured first rank, followed by timing of training is not suitable (74.17%), absence of field visit on successful demonstration during training (71.67%). Location of FLD and OFT are not well thought of (60%), course content of training are not related too much with felt needs (45%), over loaded information (40%), duration of training is not appropriate (37.50%), less provision for learning by doing (24.17%), less time for group discussion (17.50%) and improper use of audio visual aids (12.50%) secured 2nd rank, 3rd rank, 4th rank, 5th rank, 6th rank, 7th rank, 8th rank, 9th rank and 10th rank simultaneously.

The suggestions suggested by the respondents were identified and presented in table.5.



Table.5. Suggestions given by the respondents to overcome the constraints

(n=120*)

S. No.	Suggestions	Response		
		Frequency	Percentage	Ranking
1	Training should be organized at farmer's field when farmers are not engaged in farm operations	63	52.50	III
2	Variety of teaching aids shall be used.	11	9.17	X
3	Maximum emphasis should be given on learning by doing	91	75.83	I
4	Training should be imparted in local spoken language	54	45.00	IV
5	Training should be related to felt needs of the farmers	73	60.83	II
6	Continue rapport be maintained with farmers	29	24.17	VII
7	Transport and communication facilities should be proper	38	31.66	VI
8	Related literature should be pre distributed among the trainees	21	17.50	VIII
9	Assessment of training shall be done before concluding session.	15	12.50	IX
10	Stipend should be increased for active participation	45	37.50	V

(*-Multiple responses recorded)

From table.5, it can be interpreted that most of the farmers suggested that maximum emphasis should be given on learning by doing (75.83%) secured 1st rank, followed by training should be related to felt needs of the farmers (60.83%), training should be organized at farmer's field when farmers are not engaged in farm operations (52.50%), training should be imparted in local spoken language (45%), stipend should be increased for active participation (37.50%), transport and communication facilities should be pre-distributed among the trainees (17.50%), assessment of training shall be done before concluding session (12.50%) and variety of teaching



aids shall be used (9.17%) secured 2nd rank, 3rd rank, 4th rank, 5th rank, 6th rank, 7th rank, 8th rank, 9th rank and 10th rank respectively.

Conclusion

From the present study, it can be concluded that majority of the respondents were middle aged, illiterate, up to 5 members in their family, medium level of annual income, possesses their own land, agriculture as their main occupation, medium level of mass media exposure, office bearer in one organization, high level of extension contact. Meanwhile, more than half of the respondents had reported medium level of impact towards the activities carried out by KVK. Thus, beneficiary selection is not unbiased is a major constraint and most of the respondents suggested that maximum emphasis should be given on learning by doing. Eventually, it was implied that in order to increase efficiency of extension service delivery, reduce repetitions and for better utilization of scarce resources, effective convergence and better linkage between different organizations at all levels requires careful harmonization of work plans that will require support of the extension services to succeed.

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