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### Role of KVK program in agriculture regarding knowledge and adoption level of potato growers in district Kanpur Nagar, UP

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#### Abstract

KVK is the innovative scientific training institute which has been established throughout the country with the mandates to impart need based and skill-oriented trainings to practicing farmers, in-service field level extension workers and to those who wish to go for self-employment. The basic objective of Krishi Vigyan Kendra is focused on demonstrating the recent technology at the farmers' field through Front Line Demonstrations (FLDs). The other important activities carried out by KVK in operational villages were On Farm Trials (OFT), On and Off campus trainings, field days, sharing of know-how through cell phones and literature, celebration of technology weeks, agricultural fairs, exposure visits, etc. had provided scientific know-how to farmers. Thus, KVK bridges the gap between the technology generation and dissemination. The present study was proposed to understand the role of KVK in agriculture regarding knowledge and adoption level of potato growers.

**Keywords:** Farmers, respondents, KVK, knowledge, adoption

#### Introduction

K.V.K. is based on recommendation of the Education commission (1964-66) and the inter-ministerial committee (1973). The ICAR decided in principle to establish K.V.K. in the country. A High-level committee headed by Dr. Mohan Singh Mehta provided skill oriented vocational training support to farmers. As a mini-agriculture school with operational responsibility for technology transfer, training, adoptive research, and field extension in a particular area, Krishi Vigyan Kendra has many responsibilities. If K.V. Ks are not at fault anywhere in the agriculture information and expertise and respondents as a mini-school, the clientele consists of individuals who have a direct or indirect connection to agriculture and their pursuits from the point of view of the farming system. The first Krishi Vigyan Kendra was founded in 1974 at Pondicherry under the administration of the Tamil Nadu Agricultural University. The ICAR created the first K.V.K. in Sultanpur district of Uttar Pradesh in 1976, with local oversight provided by the Kamla Nehru Memorial Trust, Sultanpur (U.P.)

The number of KVKs has risen to 731. The KVK scheme is 100% financed by Govt. of India and the KVKs are sanctioned to Agricultural Universities, ICAR institutes, related Government Departments and Non- Government Organizations (NGOs) working in Agriculture. KVK, an integral part of the National Agricultural Research System (NARS), aims to assess location-specific technology modules in agriculture and allied enterprises through technology assessment, refinement, and demonstrations.

KVKs have been functioning as knowledge and resource centers for agricultural technology, supporting initiatives of the public, private, and voluntary sectors for improving the agricultural economy of the district and linking the NARS with the extension system and farmers.

The mandate of KVK is Technology Assessment and Demonstration for its Application and Capacity Development. To implement the mandate effectively, the following activities are envisaged for each KVK

1. On-farm testing to assess the location specificity of agricultural technologies under various farming systems.
2. Frontline demonstrations to establish production potential of technologies on the farmers' fields.
3. Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies.
4. To work as Knowledge and Resource Centre of agricultural technologies for supporting initiatives of public, private and voluntary sector in improving the agricultural economy of the district.
5. Provide farm advisories using ICT and other media means on varied subjects of interest to farmers.

#### Methodology

This chapter deals with the procedures and methods applied in collection and analysis of Data. The present study entitled, "Role of KVK program in agriculture regarding knowledge and adoption level of potato growers in district Kanpur Nagar, U.P." is confined to development during

2022-2023. The present study was conducted in the KVK locale under the CSA university of agriculture and technology Kanpur, with specific objectives for the study four villages from Block Shivrajpur were selected purposively. From each village, 20 respondents were selected purposively constituting the sample size 80. Ex-post-facto research design was used for the study. The data was collected by personal interview method by using pre structured interview schedule and latter appropriate

statistical analysis (i.e., frequency, percentage, etc.) was done to draw logical conclusion.

### Objectives

1. To study the socio-economic status of beneficiaries of KVK programs.
2. To measure knowledge and adoption level of potato grower beneficiaries of KVK.

**Table 1:** Distribution of the respondents according to their characteristics n=80

Sl. No.	Socio-economic characteristics	Frequency	Percentage
1	<b>Age</b>		
	Young (Up to 25 age group)	13	16.25
	Adults (25- 50 year)	44	55.50
	Old (Above 50 years)	21	26.25
2	<b>Education</b>		
	Illiterate	09	11.25
	Can sign only	24	30.00
	Primary education (1 to 8 standard)	27	33.75
	Middle education (9 to 10 standard)	11	13.75
	Secondary education (11 to 12 standard)	06	7.50
	Graduation and above	03	3.75
3	<b>Caste</b>		
	General	20	25.00
	Other backward caste (OBC)	42	52.50
	Schedule caste	18	22.50
4	<b>Type of family</b>		
	Joint family	31	38.75
	Nuclear family	49	61.25
5	<b>Size of land holdings</b>		
	Land less farmers	09	11.25
	Marginal farmers (up to 1 ha)	42	52.50
	Small farmers (1-2 ha)	15	18.75
	Semi-medium (2-4)	08	10.00
	Medium farmers (4-10 ha)	05	6.25
	Large farmers (above 10 h)	02	2.50
6	<b>Occupation</b>		
	Agriculture	35	43.75
	Agriculture + business	24	30.00
	Agriculture + business + service	13	16.25
	Agriculture Labour	08	10.00
8	<b>Social participation</b>		
	No membership of any organization	52	65.00
	Member of one organization	21	26.25
	Member of more than one organization	07	8.75

The data presented in table 1 indicate that the maximum 44 (55.50%) respondents belonged to the age group of 25-50 years while 21 (26.25%) are of above 50 years group and remaining 13 (16.25%) respondents belonged to the category of below 25 years of age group. In case of education, the majority of 24 (30.00%) respondents can sign only, up to primary level 15 (18.75%), up to junior high school 11 (13.75%), illiterate 9 (11.25%), up to intermediate 6 (7.50%), and graduate 3 (3.75%). From the table, it is also observed that the maximum 42 (52.50%) respondents belonged to other backward caste (OBC) followed 20 (25%) general caste and 18 (22.25%) belonged to schedule caste. The data depicted in table- 1 revealed that the majority of 49 (61.25%) were residing in a nuclear family and rest 31 (38.75%) had joint family. In case of marginal size of land

holding, majority of respondents 45 (56.25%) K.V.K. beneficiaries had marginal size of land holding followed by 17 (21.25%) small size of land holding ,5 (6.25%) medium size of land holding, 2 (2.50%) large size of land holding and 11 (13.75%) were found land less respondents. it is quite clear from the table-1 that majority of respondents 35 (43.75%) beneficiaries were doing agriculture followed by 24 (30%) agriculture and business ,13 (16.25%) farmers were engaged in agriculture and business + service and 8 (10.00%) beneficiaries were engaged as agriculture Labour. The above table shows that majority 52 (65.00%) were having no membership of any organization followed by 21 (26.25%) members of one organization and only 7(8.75%) beneficiaries were the member of more than one organization.

**Table 2:** Distribution of the respondents according to Knowledge level of beneficiaries

Sl. No	Particulars	Frequency	Percentage
1	<b>Land preparation of potato crop</b>		
	Poor (0-2)	00	00.00
	Fair (2-4)	20	25.00
	Good (4-6)	60	75.00
2	<b>Varieties of potato crop</b>		
	Poor (0-2)	5	6.25
	Fair (2-4)	35	43.75
	Good (4-6)	40	50.00
3	<b>Seed rate and sowing method</b>		
	Poor (0-2)	00	00.00
	Fair (2-4)	04	5.00
	Good (4-6)	76	95.00
4	<b>Fertilizer management</b>		
	Poor (0-2)	00	00.00
	Fair (2-4)	11	13.75
	Good (4-6)	69	86.25
5	<b>Irrigation</b>		
	Poor (0-2)	05	6.25
	Fair (2-4)	15	18.75
	Good (4-6)	60	75.00
6	<b>Plant protection measures</b>		
	Poor (0-2)	20	25.00
	Fair (2-4)	25	31.25
	Good (4-6)	35	43.75

It is observed from the table 2 that 75% of the potato growers fall under the good level category of Land preparation of potato crop and 25% farmers come under the fair level categories. None of the growers were found under poor knowledge. It is obvious from the table 2 that (50%) beneficiaries fall under the good category of Varieties of potato crop followed by (43.75) under fair knowledge category and 6.25% beneficiaries were having poor knowledge.

It is depicted from the table 2 that the knowledge level of potato growers was calculated with the help of mean value. Three class ranges were made to the entire selected potato growers 95.00 percent fall under the good knowledge category and 5.00 percent all under fair knowledge category. No farmer was found under poor knowledge category. It is concluded from the table 2 that majority of beneficiaries i.e., 86.25 percent fall under the category of good knowledge in respect to application of fertilizer in potato crop, 13.75 beneficiaries were under the category of fair level of knowledge. No. of respondents were found under poor knowledge category. It was observed from the above table 2 that 75% beneficiaries fall under the category of good knowledge, 18.75 percent fall under fair knowledge and 6.25 percent come under poor knowledge category. It is clear from the above the table that all the potato growers i.e., 43.75% fall under the good category followed by 31.25% under the fair and 25% having poor knowledge. Thus, above results show that the most of respondents have good knowledge about plant protection measure.

**Table 3:** Distribution of the respondents according to Adoption level of beneficiaries

Sl. No.	Particulars	Frequency	Percentage
1	<b>Participation of land</b>		
	Poor (0-2)	00	00.00
	Fair (2-4)	21	26.25
	Good (4-6)	59	73.75
2	<b>Improved varieties of potato</b>		
	Poor (0-2)	11	13.75
	Fair (2-4)	30	37.50
	Good (4-6)	39	48.75
3	<b>Recommended seed rate and method of sowing</b>		
	Poor (0-2)	06	7.50
	Fair (2-4)	17	21.25
	Good (4-6)	57	71.25
4	<b>Recommended dose of fertilizer management</b>		
	Poor (0-2)	12	15.00
	Fair (2-4)	19	23.75
	Good (4-6)	49	61.25
5	<b>Irrigation management</b>		
	Poor (0-2)	08	10.00
	Fair (2-4)	22	27.50
	Good (4-6)	50	62.50

It is clear from the above table 3 that 73.75% farmers fall under the high adopter category in respect to Participation of land in potato cultivation. While 26.25% beneficiaries fall under the category of medium and none fall under the low category. Thus, it is clear from the findings that all the K.V.K. beneficiaries adopting potato technology well. It is evident from above table that the (48.75%) potato growers come under the category of high adopters in respect to Improved varieties of potato, (37.50) and (13.75) percentage beneficiaries of K.V.K. comes under the medium and low adopter category, respectively. Thus, it is apparent from the below results that majority of the potato growers have good knowledge about improved varieties of potato. It is evident from table 3 that (71.25) percent respondents come under the category of high adopter in respect to seed rate and method sowing, 17.25 percent respondents belong to medium level of adopter category and 7.50 percent are low adopter category. It is observed from the table 21 that 61.25 percent potato growers fall under the category of high adopter followed by 23.75 percent in the category of medium adopter and 15 percent beneficiaries lie in the low category. Thus, it is evident from above findings that majority of respondents have high to medium level of adoption level in respect to recommended dose of fertilizer management.

It is obvious from the above table 3 that the majority of beneficiaries (62.50) belonged to the category of high adopter in respect to irrigation in potato crop followed by (27.50) percent in the category of medium adopter and (10.00) percent beneficiaries fall under the category of low adopter.

Thus, it is clear from the above results that the majority of beneficiaries adopt recommended irrigation in potato crop

**Conclusion**

On the basis of above findings of the research, it can be concluded that most of the farmer were having fair and good level of knowledge adoption about potato production technology while they had poor level of knowledge about

plant protection measure practices in potato crop. In case of adoption level of potato crop majority of farmers were having medium level followed by high level of adoption except seed treatment, plant protection measure practices of potato crop.

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