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Constraints Perceived by Farmers Towards Adoption of Technology Disseminated by KVKs in Chhattisgarh State

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Abstract

The present investigation was carried with 330 beneficiary farmers of 11 selected KVKs of Chhattisgarh state with its specific objectives to analyze the various constraints perceived by the beneficiaries towards adoption of technologies disseminated by the KVKs. Results reveals that the majority of the farmers belonged to age group of 36-55 years, scheduled tribe caste, educated up to primary level resided with nuclear family system with medium sized family, up to 3 members engaged in agriculture with farming experience above 30 years having membership of at least one social organization. It was found that, the majority of the beneficiaries (56.67%) had regular contact with KVK followed by the farmers had occasional contact with Agriculture department, NGOs and Horticulture department which were 36.67, 24.24 and 16.97 per cent respectively. The extension participation of the respondents were observed medium to high level by 44.24 and 26.97 per cent beneficiaries with KVK s followed by 12.73 and 12.12 per cent respondents with low level participation in extension programmes of Agriculture dept., NGOs and Horticulture department respectively. Lack of participatory approaches to implements the intervention was reported as most severe constraints with 85.05 per cent followed by lack of follow-up of interventions, lack of need based and timely information were found severe with score of 80.10 and 76.36 per cent respectively. Organization of need based, practical oriented trainings, regular monitoring and follow up were major suggestions given by 76.67 and 63.64 per cent respondent to overcome with these constraints.

Key words : *Constraints, KVKs, adoption, extension contact, extension participation, suggestion.*

Introduction

KVK is an integral part of the National Agricultural Research System (NARS) aims to assess and refine the location specific technologies related to agriculture and allied sectors. Presently, KVKs are working as nodal agencies to facilitate the knowledge and expertise of farm technologies at district level supporting the initiatives of public, private and voluntary sector for improving the agricultural economy of the district and functioning to bridge the NARS with extension system and farming community of country. The main activities of the KVKs are technology assessment and refinement through conducting the OFTs, organizing FLDs to check the potential of promising technologies, capacity building of field functionaries of line department for better dissemination of agricultural technologies and also transfer the skills through conducting vocational trainings of the farmers, farm women and rural youths. Various studies were made to identify the problems in technology dissemination by KVKs but maximum studies are based on the responses of KVKs professionals. The farmers' perspective analysis of the constraints in adoption of technologies disseminated by KVKs is negligible. It is also necessary to enlist the various problems perceived by farmers regarding adoption of the technologies disseminated by the KVKs to delineate these problems and accelerate the technology dissemination by KVKs through better performance. Keeping these in view, present study was carried out in eleven selected KVKs of the Chhattisgarh State with its specific objective to analyze the various constraints perceived by the beneficiaries towards adoption of technologies disseminated by the KVKs and also obtain the suggestions from the respondents to overcome with these constraints.

Materials and Methods

Eleven KVKs were selected randomly from all three agro-climatic zones of the Chhattisgarh State. From each selected KVKs, two villages were selected purposively where KVKs made its interventions as adopted village. From each village, 15 beneficiary farmers were considered as respondents purposively. In this way, a sample of 330 beneficiary farmers (11x2x15) was considered as respondents for above study. A well-structured interview schedule was used for collection of information from beneficiary farmers. Appropriate statistical tools were used for the purpose of computation and data analysis of the information gathered regarding above investigation.

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Table-1 : Socio-personal characteristics of the respondents.

n=330

Sl.No.	Particulars	F	%
1. Age			
	Up to 35 years	49	14.85
	36 to 55 years	195	59.09
	56 years and above	86	26.06
2. Education			
	Illiterate	48	14.55
	Primary school	86	26.06
	Middle school	59	17.88
	High school	65	19.70
	Higher secondary	51	15.45
	Graduate and above	21	6.36
3. Caste			
	Scheduled Caste	06	1.82
	Scheduled Tribe	180	54.55
	Other Backward Class	125	37.88
	General	19	5.76
4. Family type			
	Nuclear	188	56.97
	Joint	142	43.03
5. Family size			
	Small	140	42.42
	Medium	148	44.85
	Big	42	12.73
6. Family members engaged in agriculture			
	Up to 3 members	209	63.33
	4 to 6 members	107	32.42
	> 6 members	14	4.24
7. Farming experience			
	Up to 10 years	57	17.27
	11 to 20 years	88	26.67
	21 to 30 years	85	25.76
	Above 30 years	100	30.30
8. Social participation			
	Membership of 1 organization	203	61.52
	Membership of > 1 organizations	110	33.33
	Office bearers	17	5.15

Results and Discussion

Socio-personal attributes of the respondents : Variables *viz.,* age, education, caste, family type, family size, family members engaged in agriculture, farming experience and social participation were studied under the socio-personal attributes of the respondents which are given in Table-1. Result reveals that majority of the beneficiary respondents (56.09%) belonged to age group of 36 to 55. educated up to primary school followed by high school (19.70%) and middle school (17.88%). Data pertaining to caste of the respondents reveals that 54.55 per cent of beneficiary respondents belonged to Scheduled Tribe followed by Other Backward Class (37.88%). Nearly 57.00 per cent of beneficiaries belonged to nuclear family and rest of them belonged to joint family. As far as family size is concerned, it was found that 44.85 per cent of the beneficiary farmers had medium size family followed by small size family (42.42%).It is crystal clear that more than 60.00 per cent of the respondents' family engaged their up to 3 members in agriculture followed by more than 30.00 per cent of the farm families who engaged their 4 to 6 members in agricultural activities. (1) was also revealed almost similar findings regarding socio-personal attributed of the tribal farmers of Meghalaya in his study. Data regarding farming experience compiled and presented in Table-1 points out that the KVK beneficiaries around 30.00 per cent of the respondents had more than 30 years of farming experience followed by 11 to 20 years (26.67%). Data pertaining to social participation of respondents highlights that the majority of the beneficiaries (95.76%) were member of cooperative society followed by *Kisan Club* (38.79%). The findings also point out that only few beneficiaries were having the position of executives in various social organizations.

Level of contact with extension agencies and extension participation : To find out the contact and participation level of the respondents in different extension agencies, questions were asked and tabulated in Table-2. The responses were compiled in form of respondent's distribution with respect to their frequency of contact and participation in extension activities performed by different extension agencies in study area. In case of level of contact from state agriculture department, majority of the KVK beneficiaries (56.36 %) had never contact with state agriculture department followed by 36.67 per cent farmers who had occasionally contact with agriculture department. Only 6.97 per cent beneficiary farmers had regular contact with agriculture department for farming related issues. In case of frequency of contact with Krishi Vigyan Kendra, it was found that all the beneficiary were in contact with KVK out of which 56.67 per cent were approached to KVK regularly followed by 43.33 percent respondents who had medium level of contact with KVK to resolve their farming related concerns. The contact of beneficiary farmers with fishery department was very negligible while, more than 87.00 per cent KVK beneficiaries had never approached to veterinary department followed by 73.33 and 70 per cent KVK beneficiaries who had never contacted horticulture department and NGOs for their farming related issues. The overall extent of extension contact by the KVK beneficiaries is presented in Fig.-1 reveals that the majority of the respondents (47.27%) had medium extent (33.34-66.66%) of contact with extension agencies followed by 46.36 per cent respondents who had contact with extension agencies with lower extent *i.e.* upto 33.33 per cent. Only 6.36 per cent of KVK beneficiaries were had higher extent (>66.66%) of contact with different extension

Table-2 : Distribution of the respondents according to their level of contact with extension agencies and extension participation. n=330

Sl. No.	Name of Agency	Extension Contact Level			Extension participation Level			
		Never	Occasionally	Regularly	Nil	Low	Med.	High
1.	Agriculture Department	186 (56.36)	121 (36.67)	23 (6.97)	211 (63.94)	76 (23.03)	31 (9.39)	12 (3.64)
2.	Krishi Vigyan Kendra	00 (0.00)	143 (43.33)	187 (56.67)	00 (0.00)	95 (28.79)	146 (44.24)	89 (26.97)
3.	Veterinary Department	288 (87.27)	20 (6.06)	22 (6.67)	307 (93.04)	03 (0.90)	07 (2.12)	13 (3.94)
4.	Fishery Department	320 (96.97)	03 (0.91)	07 (2.12)	326 (98.79)	00 (00.00)	00 (0.00)	04 (1.21)
5.	Horticulture Department	242 (73.33)	56 (16.97)	32 (9.70)	268 (81.21)	40 (12.12)	18 (5.46)	04 (1.21)
6.	Non Government Organization	231 (70.00)	80 (24.24)	19 (5.76)	279 (84.55)	42 (12.73)	06 (1.82)	03 (0.91)

Table-3 : Constraints reported by farmers regarding technology disseminated by KVK.

Sl. No.	Constraints reported by respondents	Severity (%)	Rank
1.	Lack of need based information on time.	76.36	IV
2.	Lack of follow-up by KVK after implementation of interventions.	80.10	II
3.	Lack of participatory approach in implementation of interventions	85.05	I
4.	Lack of suitability in timing of trainings.	71.72	VI
5.	Lack of clarity in content of messages received from KMA.	74.34	V
6.	High cost and risk involvement in adoption of technology disseminated by KVKs.	67.78	VIII
7.	Lack of marketing support.	50.51	X
8.	More distance of KVK from village.	53.84	IX
9.	Lack of need based and practical oriented training programme.	78.69	III
10.	Non availability of critical inputs on time.	43.33	XI
11.	Inefficiency in use of digital devices.	70.00	VII

agencies. Regarding for level of extension contact by KVK beneficiaries, similar findings were reported by (2) in his study.

In case of level of extension participation of beneficiary farmers of selected KVKs, majority of the respondents (44.24%) shows medium level of participation in extension activities performed by KVKs followed by 28.79 and 26.97 per cent respondents who participated in extension activities of KVKs in low and high level respectively. In case of participation in extension activities of state agriculture department, majority of the KVK beneficiaries (23.03%) participated in lower extent followed by 9.39 and 3.64 per cent respondents who had participated in medium to higher extent in extension activities performed by state agriculture department. It was also remarkable that, about 63.94 per cent of KVK beneficiaries were not participated in extension activities performed by agriculture department. About 12.73 per cent respondents were participated with lower extent in extension activities performed by Non-Governmental Organizations (NGOs) followed by 12.12 per cent farmers who had participated with lower extent to Horticulture department. There were very negligible extent of participation was observed in extension activities performed by veterinary and fishery department by the KVK beneficiaries in study area. Fig.-2 shows the extent of overall extension participation by the KVK beneficiaries. The diagram depicts that the majority of the respondents (63.00%) were participated in lower extent which was up to 33.33 percent followed by 32.00 per cent respondents whom participation was found medium extent i.e. 33.34-66.66 per cent. Only 5.00 per cent KVK beneficiary were found participated higher level (>66.66%) in all the extension activities performed by different extension organizations in study area. Same results were also reported by (3) regarding level of extension participation of KVKs beneficiaries in Gujartat State.

Constraints reported by farmers regarding adoption of technology disseminated by KVK : Various constraints were reported by the beneficiary farmers as perceived by them to access the interventions and technologies disseminated by the KVKs which are compiled and preferences given as per the severity index are presented in Table-3. The result reveals that the lack of participatory approach in implementation of interventions by KVKs was perceived most sever constrains as per the severity index i.e. 85.05 per cent followed by lack of follow-up by KVKs after implementation of interventions, lack of need based practical oriented training programme, lack of need based information on time, lack of clarity in content of messages received from KMA, lack of suitability in timing of trainings and inefficiency in use of digital devices which were perceived

Table-4 : Suggestions given by the KVK beneficiaries to overcome with constraints. n=330

Sl. No.	Suggestions	F	%
1.	Need based and practical oriented training should be organized by KVKs as per convenience of farmers	253	76.67
2.	Regular monitoring and follow up of interventions should made be ensured by KVKs.	210	63.64
3.	Need based and real time information should made available by KVKs.	197	59.69
4.	Involvement of farmers and stakeholders in planning and implementation of interventions by KVKs must be considered.	188	56.96
5.	Content of advisory services should be designed in understandable manner with local touch.	176	53.33
6.	Cost cutting and risk minimizing technology should be catered by KVKs to the farming communities.	142	40.30
7.	Awareness campaign should be organized by KVK for minimizing the problem of grazing and wild animals.	126	38.18
8.	Marketing platformshould be provided by the KVKs to the farmers.	113	34.24

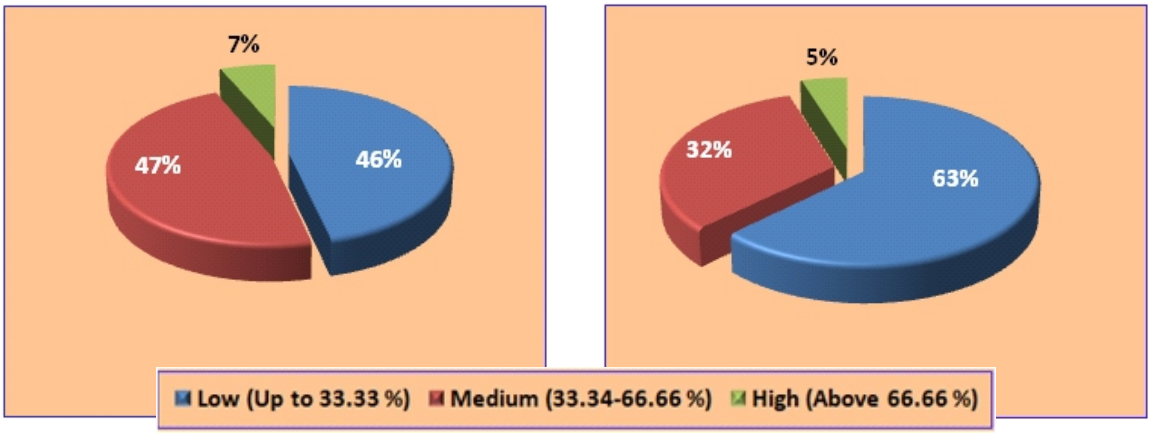

Fig.-1 : Level of extension contact and extension participation with extension agencies.

80.10, 78.69, 76.36, 74.34, 71.42 and 70.00 per cent sever respectively. Other constrains which were reported by the famers were; high cost and risk involvement in adoption of disseminated technology by KVKs, more distance of KVK from village, lack of marketing support and non-availability of critical inputs on time which were perceived 67.78, 53.84, 50.51 and 43.33 per cent severe by the KVK beneficiaries. Similar findings were also reported by (4) regarding constraints facedin use of mobile advisories.

Suggestions given by the KVK beneficiaries to overcome with constraints : In order to eliminate the constraints, the suggestions were given by the respondent which were compiled and presented in Table-4. The result reveals that the majority of the respondents (76.67%) were suggested that the need based and practical oriented training should be organized by KVKs as per convenience of farmers followed by 63.64 per cent respondents who suggested regular monitoring and follow-up of interventions should made be insured by KVKs. About 59.69 per cent KVK beneficiaries were stated that the need based and real time information should made available by KVKs followed by 56.96 and 53.33 per cent respondents who suggested that the involvement of farmers and stakeholders in planning and implementation of interventions by KVKs must be considered and content of advisory services should be designed in understandable manner with local touch respectively. The KVK beneficiaries were also suggested the cost cutting and risk minimizing technology should be catered by KVKs to the farming communities (40.30%) and awareness campaign should be organized by KVK for minimizing the problem of grazing and wild animals suggested by 38.18 per cent respondents while, 34.24 per cent respondents were suggested that the marketing platforms should be provided by KVKs to the farmers for proper disposals of their produce. Study conducted by (5) also revealed to conduct practical oriented trainings and regular monitoring and follow-up of the KVKs intervention for increasing the performance of KVKs as suggested by the farmers.

Conclusions

In light of the above findings, it may be concluded that the majority of the KVK beneficiaries are belonging to tribal community educated up to primary school level, had very limited extent of contact and participation in programmes run by different extension agencies rather than KVKs of their locality, which indicates that; comparatively they are giving more preference to KVKs than other agencies. As per the constraints reported by them, lack of participatory approach, lack of proper follow-up, lack of need based and practical oriented trainings and timely information were the most sever constraints perceived by them. Lack of

clarity in content of messages sent through advisories, lack of suitability of timing of trainings and inefficiency in use of digital devices were found other severe constraints in adoption of technologies disseminated by KVKs. As per the suggestions obtained by the beneficiary farmers of selected KVKs, It is necessary to design need-based practical oriented training programmes, proper follow of interventions drawn by KVKs. To ensure the participatory approach in various activities, it is necessary to involve local farmers and stakeholders in planning and implementation of the KVK interventions in farmers' field. The content of advisory services should design in understandable manner with local touch to proper dissemination of agricultural information among the farming communities. Above efforts may be improve the KVKs performance and also helps to KVKs personnel to smoothly implement the interventions in farmers' fields for their betterment.

References

1. Medhi S., Singha A.K., Singh R. and Singh R.J. (2020). Socio-Economic, Psychological Profile and Constraints Faced by the KVK Adopted Farmers for Improved Rice Cultivation in West Garo Hills District. *Economic Affairs,* 65(3): 379-388.
2. Vohra F.N. (2016). Attitude of Farmers towards Krishi Vigyan Kendra, Navsari of South Gujarat. *M.Sc. (Ag.) Thesis, Navsari Agricultural University,* Navsari, Gujarat.
3. Chaudhary P.J. (2018). Impact of Krishi Vigyan Kendra, Vejalpur of Panchmahals District of Gujarat State. *M.Sc. (Ag) Thesis, Anand Agricultural University,* Anand, Gujarat.
4. Giridhar K.A., Devendrappa S. and Potdar M.P. (2019). Constraints Faced by the Farmer in Availing Mobile Phone Services and Suggestions for Future Development. *Journal of Pharmacognosy and Phytochemistry,* 8(5): 2182-2184.
5. Nath Dipak, Jain P.K., Talukdar R.K. and Hansra B.S. (2016). Constraints Encountered by the Beneficiaries of Krishi Vigyan Kendra in North Eastern Region of India. *Journal of Extension Education,* 28(2): 5665-5667.