

## **Constraints Perceived by Tribal Farmers in Adoption of Recommended Practices**

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### **ABSTRACT**

KVKs are grass root level institutions imparting training programme for the rural people. Undoubtedly training helps to improve the knowledge and skill. Therefore, the present study was undertaken during 2013-14 to identify the constraints faced by the tribal farmers in adoption of improved production technology given by Krishi Vigyan Kendra (KVK) working in the tribal district of Madhya Pradesh. The study was conducted with 225 tribal farmers (beneficiaries) randomly selected from 12 villages of Mandla, Dindori and Shahdol district. Result of the study revealed that lack of agro based and rural industries for the income generation and employment to tribals, lack of current agricultural literature, demonstrations not conducted adequately and timely, co-operative societies are not providing seeds timely, lack of storage facilities were the top most ranked constraints faced by the tribal farmers.

**Key words:** Adoption, beneficiaries, constraints, krishi vigyan kendra

### **INTRODUCTION**

Use of modern inputs and adoption of improved technologies are undoubtedly more important in increasing the productivity. Research evidences show that the adoption of recommended production technologies gives higher production, consequently more income to the farmers. But the extent of adoption of recommended technologies by the farmers depends upon various factors as well as constraints faced by them. Constraints refer to the item of difficulties faced by farmers. (Tiwari and Pathek, 2011). Krishi Vigyan Kendra is a project of ICAR for testing and transfer of Agricultural technologies to bridge the gap between production and productivity and to increase self employment opportunities among the farming communities. The trainings offered here follow the principles of Learning by doing and "seeing is believing". It offers skill and knowledge oriented trainings in multidisciplinary areas. The KVK is the light house of knowledge to the farming community of the State. KVK's function by the collaborative participation of scientists, subject matter experts, extension workers and farmers. Tribal peoples have significant contributions to the local and national economy by being participated in income generating activities (IGAs) such as vegetable production, nursery establishment, livestock and poultry rising, cottage industry, small business *etc.* Unfortunately, the tribal people community is almost unknown to modern agricultural technology and has been left out from the main stream of economic development, (Mondal, 2006)

In Madhya Pradesh state 47 KVKs are functioning under zone VII ZPD, out of which 6 KVKs are working in tribal districts. These KVKs are primarily focused on dissemination of location specific technologies access to information for upliftment and empowerment of tribals. The government is also running various programmes to improve the economic conditions of the tribals. Agriculture being the backbone of tribal economy, it is envisaged to enhance agricultural production in tribal areas, (Kirar, 2009).

Constraints refer to the factors or conditions, which limit or restrict the use of an improved practice or innovation resulting in low production or insufficient use of resources. Training programme for the tribal people should be designed based on their felt needs. Training needs of the tribal people refers to one's need for gaining knowledge and skills on different agricultural and non-agricultural aspects and successful adoption of these activities (Rokonuzzaman, 2013). The present study 'entitled constraints perceived by tribal farmers in adoption of recommended practices' was undertaken with the prime objectives of identifying the major constraints faced by the tribal farmers.

### **METHODOLOGY**

The study was carried out in three districts of Madhya Pradesh *i.e.* Mandla Dindori and Shahdol during 2013-14 as these districts comes under tribal districts of M.P. The Mandla district comprises of seven blocks out of which

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two blocks were selected and from each selected block two adopted villages of KVKs were selected *i.e.*, Prempur, Bhavarda, Silwara and Madanpur. The Dindori district also comprises of seven blocks out of which two blocks were selected and from each selected block two adopted villages of KVKs were selected *i.e.*, Rusamal, Nariya, Bilasar and Chaura. The Shahdol district comprises of five blocks out of which two blocks were selected and from each selected block two adopted villages of KVKs were selected *i.e.*, Sinduchunia, Kalyanpur, Shahpur and Kudeli. A comprehensive list of tribal farmers of each selected village was prepared with the help of KVKs of each district. 75 equal numbers of beneficiaries from each district was selected randomly, thus the total 225 tribal farmers was the sample size of the study.

### RESULTS & DISCUSSION

The data presented in Table 1 showed profile of beneficiaries and non- beneficiaries. The study revealed that the highest percentage of beneficiaries 52 per cent belonged to middle age group. The data indicates that about 23.55 per cent of the beneficiaries had education up to high school.

In case of occupation most of the beneficiaries 49.33 per cent was doing agriculture + other livelihood of the family. In case of annual income most of the beneficiaries 42.23 per cent had medium annual income (₹ 1,00,001 -1,76,000/-). About 35.12 per cent of beneficiaries had medium land holdings. In case of farming experience highest percentage of beneficiaries 38.67 per cent had medium experience.

The data regarding attitude towards technological demonstration indicates that majority of beneficiaries 69.33 per cent had high attitude towards technological demonstration and 77.78 per cent had high knowledge about KVK activities perception of beneficiaries towards scientific agriculture 53.34 per cent of beneficiaries had high perception. In case of market orientation, 36.88 per cent of beneficiaries had high market orientation and 77.78 per cent of beneficiaries had high scientific orientation.

It is evident from the data that about 67.56 per cent of beneficiaries had high aspiration level. In case of participation 47.11 per cent had medium participation in KVK activities, 80.00 per cent beneficiaries had medium use of information sources and 64.45 per cent beneficiaries had high training exposure.

**Table 1: Profile of tribal farmers**

A. Independent Variable	CATEGORIES	N= 225	
		Beneficiaries	
		Freq	% age
Age	Young age group ( Up to 35 years)	66	29.34
	Middle age group (36-50yrs)	117	52.00
	Old age group (Above 50)	42	18.66
Education	Illiterate	39	17.34
	Up to primary school	31	13.78
	Up to middle school	34	15.11
	Up to High school	53	23.55
	Up to Higher Secondary	53	23.55
	Up to College	15	06.67
	Agriculture	35	15.55
Occupation	Agriculture + Labour	23	10.22
	Agriculture + Other	111	49.33
	Agriculture + Cast Occupation	11	04.88
	Agriculture + Independent Business	45	20.00
Annual income	BPL (Below ₹ 24,000/-)	30	13.33
	Low income (₹ 24,000 - 1,00,000/-)	59	26.22
	Medium income (₹ 1,00,001 – 1,76,000/-)	95	42.23
	High income (₹1,76,001 – 2,50,000/-)	41	18.22
Land Holding	Marginal (Below 1 ha)	40	17.77
	Small (1.01 – 2 ha)	65	28.88
	Medium (2.01 – 4 ha)	79	35.12
	Large (Above 4 ha)	41	18.23
Farming Experience	Low experience (5 - 16 years)	78	34.66
	Medium experience (17 - 27 years)	87	38.67
	High experience (28 - 38 years)	60	26.67
Attitude towards Technological Demonstration	Low (10 – 23)	40	17.77
	Medium (24 - 36)	29	12.88
	High (37 - 50)	156	69.33
Knowledge about KVK activities	Low (Up to 8)	30	13.33
	Medium (19 - 17)	20	08.89
	High (18 – 25)	175	77.78
Perception towards Scientific Agriculture	Low (7 - 21)	40	17.78
	Medium (22 - 35)	65	28.88
	High (36 - 49)	120	53.34
	Low (Up to 3)	63	28.00
	Medium (4 - 6)	79	35.12

Market Orientation	High	(7 - 10)	83	36.88
	Low	(6 - 18)	30	13.33
Scientific Orientation	Medium	(19 - 30)	20	08.89
	High	(31 - 42)	175	77.78
	Low	(3 - 8)	12	05.33
Aspiration level	Medium	(9 - 14)	61	27.11
	High	(15 - 20)	152	67.56
	Low	(Up to 4)	17	07.55
Participation in KVK activities	Medium	(5 - 9)	106	47.11
	High	(10 - 14)	102	45.34
	Low	(0 - 6)	20	08.88
Use of information sources	Medium	(7 - 13)	180	80.00
	High	(14 - 20)	25	11.12
	Low	(Up to 2)	28	12.44
Training exposure	Medium	(3 - 4)	52	23.11
	High	(5 - 6)	145	64.45

### CONSTRAINTS

#### Economic constraints:

Table no 2. reflected that “Lack of agro based and rural industries for the income generation and employment to tribals” was the top most economic constraints faced by beneficiaries of KVK. This was followed by “Lack of money to purchase useful inputs” “Lack of money for land preparation” “High cost of seeds” and “High labour charges”. Similar result also reported by Paniker and Chaudhari (2000). Thus it is clear from above table and discussion “Lack of agro based and rural industries for the income generation and employment to tribals” was the major economic constraints and “High labour charges” was the least economic constraints faced by the beneficiaries.

**Table No 2: Economic constraints**

Constraints	Beneficiaries N=225		
	f	%	Rank
Lack of agro based and rural industries for the income generation and employment to tribals.	90	40.00	I
Lack of money to purchase useful inputs.	50	22.22	II
Lack of money for land preparation.	45	20.00	III
High cost of seeds.	40	17.77	IV
High labour charges.	30	13.33	V

**Table No 3: Technical constraints**

Constraints	Beneficiaries N=225		
	f	%	Rank
Lack of information's about tribal programmes and insurance policies.	50	22.22	II
Lack of current agricultural literature.	80	35.55	I
Lack of knowledge about insects and diseases.	40	17.77	III
Lack of crop related training.	25	11.11	IV
Lack of knowledge about soil testing.	10	4.44	V
Technological skills are not developed through special training programme.	10	4.44	VI

**Technical constraints:** Table no 3. Shows that “Lack of current agricultural literature” followed by “Lack of information's about tribal programmes and insurance policies” and “Lack of knowledge about insects and diseases” “Lack of crop related training” “Lack of knowledge about soil testing” “Technological skills are not developed through special training programme”. The work of Girase *et al.* (2004).

An overall picture of above table indicates that “Lack of current agricultural literature” was the major technical constraint while “Lack of knowledge about soil testing” and “Technological skills are not developed through special training programme” was the least important technical constraints as expressed by the beneficiaries farmers of KVKs.

**Table No 4: Extension constraints**

Constraints	Beneficiaries N=225		
	f	%	Rank
Lack of technical guidance by the KVK.	50	22.22	III
Irregular visit of FEOs.	100	44.44	II
Demonstrations not conducted adequately and timely	160	71.11	I
Lack of trainings provided by KVKs.	40	17.77	IV

**Extension constraints:** It is clear from the table no.4 that the “Demonstrations not conducted adequately and timely” “Irregular visit of FEOs” “Lack of technical guidance by the KVK” “Lack of trainings provided by KVKs” ranked first, second, third and fourth respectively. The Singh *et al.* (2013) Therefore, it is reflected from above result the most of the beneficiaries were facing the as major constraint “Demonstrations not conducted adequately and timely” and constraints “Lack of trainings provided by KVKs” was least constraint obtained by the beneficiaries of KVKs.

**Table No 5: Situational constraints**

Constraints	Beneficiaries N=225		
	f	%	Rank
Low market price.	200	88.88	II
Lack of storage facilities.	220	97.77	I
Lack of Irrigation facilities.	170	75.55	III
Lack of market.	150	66.66	IV

**Situational constraints:** It is evident from the above data “Lack of storage facilities” ranked first in situational constraints followed by “Low market price” “Lack of Irrigation facilities” and “Lack of market”.

Thus it can be concluded from above result that “Lack of storage facilities” was the major constraints and “Lack of market” was the least constraints as expressed by the tribal farmers.

### CONCLUSION

On the basis of above study it may be concluded that the major constraints as perceived by the beneficiaries were lack of agro based and rural industries for the income generation and employment to tribals, lack of current agricultural literature, demonstrations not conducted adequately and timely, co-operative societies are not providing seeds timely, lack of storage facilities as economic constraints, technical constraints, extension constraints and situational constraints, respectively. They also suggested following point.

- i. Improved seeds should be made available in time and in sufficient quantity by the KVK.
- ii. Formation of more cooperative societies.
- iii. Adequate fertilizers made available at time.
- iv. On field demonstrations.
- v. Frequent visits to research farms.
- vi. Availability of current agricultural literature.
- vii. Maximum contact by scientists of KVK.
- viii. Cost of fertilizers and weedicides should be reduced.
- ix. Crop insurance made simple.
- x. More intensive off campus training programme.

Effective training program designed for the tribal people for better livelihood will go a long way in their required daily expenditure. Hence, it is necessary to have

a complete understanding of the needs of the tribal people before launching aforementioned training programme.

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