

Transfer of Technology through Krishi Vigyan Kendra for the Tribal Farmers in Hilly Areas of Koraput District

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ABSTRACT

The Krishi Vigyan Kendras (KVK) is of national importance which would help in accelerating the agricultural production and also in improving the socio-economic conditions of the farming community. Krishi Vigyan Kendra, Koraput is situated in the Eastern Ghat Highland Agro-climatic Zone of Orissa to cater the needs of the farming communities of Koraput district. Need based training programmes are being conducted by the KVK in various disciplines such as agronomy, horticulture, soil science, women in agriculture, agricultural engineering and others. Survey method by personal interview was used for collecting the required information on component wise crop production technology transferred, extent of adoption of technology, discipline wise training organized by KVK and farmers response towards training, costs and returns of crop production. It was concluded that KVK, Koraput playing a vital role in disseminating the improved crop production technology and helps in increasing the crop yield. Further research need to be focused on the problems and constraint for adoption of the technology.

Keyword: Krishi Vigyan Kendra, training, transfer of technology, adoption, crop yield

INTRODUCTION

There is a large section of farming community which is still unaware of technological developments in the field of Agriculture, Horticulture and Animal Husbandry. Educating of farmers through training programme is a crucial input for the rapid transfer and adoption of agricultural technology. The agricultural production can be increased if the production development programmes focusing more and on transferring the new technologies from research institutes to the farmers fields and make them more result oriented. Realizing this crucial gap, the Indian Council of Agricultural Research established Krishi Vigyan Kendras (KVK) as an innovative institution for vocational training and also conducting of farm research for technology refinement to promptly demonstrate the latest agricultural technologies to the farmers as well as the extension workers. The Krishi Vigyan Kendras (KVK) is of national

importance which would help in accelerating the agricultural production and also in improving the socio-economic conditions of the farming community. KVK is an innovative institution providing for (i) effective linkage among researchers, farmers and extension workers (ii) practical approach to training through "Learning by doing" (iii) flexible syllabi based on a survey and needs of farmers and location specific requirements.

Krishi Vigyan Kendra, Koraput is situated in the Eastern Ghat Highland Agro-climatic Zone of Orissa. KVK, Koraput was established in the year 1983 to cater the needs of the farming communities of Koraput district. Koraput is mostly a tribal district characterized by high altitudes ranging from 300m to 900m above the mean sea level (MSL) dominated by red lateritic soil with low organic matter and having a pH range from 4.9 to 5.5. The KVK is well equipped in terms of specialists manpower and resources. Need based training

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programmes are being conducted by the KVK in various disciplines such as agronomy, horticulture, soil science, women in agriculture, agricultural engineering and others. The present study focused on how KVK is transferring the technology through training and demonstration and response of farmers in adoption of technologies with economic viability.

MATERIALS AND METHODS

The study was confined to the two blocks of the Koraput districts such as Semiliguda, Nandapur. In these blocks maximum numbers of farmers were benefited by the KVK. Five villages namely Luhaba, Maliburuda, Muliaput, Dakriput and Galput from these two blocks and 100 farmers who were adopted by KVK, Koraput for transfer of technology during Kharif and Rabi season were selected from these villages for detailed survey. Different components of crop production, horticulture, farm mechanization and women in agriculture were given by the scientists of the KVK, Koraput to the selected farmers. The required information was collected by survey method by personal interview on component wise of crop production technology. The required information were transfer of technology, extent of adoption of technology by contact farmers, discipline wise training organized by KVK and farmers response

towards training, costs and returns of crop production technology etc. to accomplished the objectives of the study. The data collected for this study refer to Kharif and Rabi season during the year 2013-14.

RESULTS AND DISCUSSION

Training achievements

The main mandate of Krishi Vigyan Kendra is to conduct the variety of trainings for the benefit of farmers, rural youth and extension personnel of the district. Training programme helps the farmers to aware the latest technical knowledge and skill related to agriculture and allied field. KVK training programme starts with identification of training needs in the villages. Then the training programme conducted to improve the knowledge and developed new skills required for adoption of the latest technology and build up scientific attitude among farming community.

Krishi Vigyan Kendra, Koraput conducted the training programme in five disciplines such as agronomy, horticulture, soil science, agricultural engineering and women in agriculture (Table 1). Trainings on agricultural engineering were very much useful because farm mechanization status of the Koraput district is very poor. As the farming communities are generally tribal and resource poor,

Table 1: Achievements of training programme for practicing farmers and farm women of KVK, Koraput during 2013-14

Sl. No.	Particulars	Agronomy	Horticulture	Soil science	Agricultural Engineering	Women in agriculture	Total
1.	No. of trainings	13	12	12	7	13	57
2.	Duration in days	17	15	15	10	23	80
3.	No. of participants						
	(i) General						
	Male	18	12	17	5	0	52
	Female	12	11	13	2	24	62
	(ii) SC						
	Male	86	21	81	28	0	216
	Female	55	23	48	12	47	185
	(iii) ST						
	Male	65	73	57	82	0	277
	Female	45	90	44	29	190	398
	(iv) OBC						
	Male	25	26	24	13	0	88
	Female	15	44	16	4	64	143
	Total	325	300	300	175	325	1425

they are very much interested in small farm implements. They are also lacking the knowledge of the use of improved farm implements. Trainings on women in agriculture were also very much useful. This may be due to the fact that specialized and intensive practical training was imparted. Training on agronomy, horticulture and soil science were also useful but less as compared to the agriculture engineering and home science discipline.

Technology transfer and adoption

The data on transfer of technology under KVK, Koraput were collected in season wise under the different thematic area/components such as integrated crop management, integrated weed management, integrated nutrient management, fruit crop cultivation, vegetable crop cultivation, tuber crops cultivation, spice crop cultivation, flower cultivation, women empowerment, livestock management and farm mechanization. The data collected from the selected respondents are presented in the Table 2.

Some demonstrations were conducted on paddy, millets, fruits, vegetables and farm mechanization for better awareness of the improved cultivation practices during Kharif and Rabi season. On thematic area basis highest adoption were found in farm mechanization and then women empowerment and livestock management. This implies that farmers are very much interested in use of improved farm implements and women involvement in

agriculture. It was also found that adoption were little higher during Kharif than Rabi season.

Constraints for poor adoption

During training programme and field visit, some problems or constraint faced by the farmers for adoption of new technology has been studied. These constraints may be useful to the KVK for new technology and also refinement of the technology. The major constraints for the poor adoption of technology are marketing and storage facility of the farm produce. The unavailability of improved farm implements and their service provider is also the major problem for poor adoption of farm mechanization. All the major constraints are given in the Table 3.

Effect of technology on crop production

Table 4 indicated the increased in production of the different crops after adoption of the improved package and practices in the KVK adopted villages. The increased in yield in HYV of paddy variety Pratikhya was 26.2 % as compared to local variety. The B:C ratio of the paddy was found to be 1.85. The increase in yield of niger was found to be 32.43% as compared to local variety and B:C ratio was 1.4. Increase in yield of 54.6% was found to be in case of turmeric production. Similarly increase in yield of 41% was found to be in case of ginger cultivation. The groundnut yield increased by 28 % and B:C ratio was found to be 1.71. In case of vegetables such as tamato, cabbage and bringal, the increase in yield was found to be 20-25%.

Table 2: Technology transfer and adoption by the respondents in different thematic area wise during Kharif and rabi season during 2013-14

Sl. No.	Thematic area	Kharif (n=100)			Rabi (n=100)		
		C	P	N	C	P	N
1.	Integrated crop management	35	47	18	32	46	22
2.	Integrated weed management	42	52	6	38	51	11
3.	Integrated nutrient management	38	47	15	39	47	14
4.	Fruits crop cultivation	38	44	18	38	41	21
5.	Vegetable crop cultivation	42	46	12	44	42	14
6.	Tuber crop cultivation	32	48	20	34	46	20
7.	Spice crop cultivation	34	52	14	32	50	16
8.	Women empowerment	58	32	10	55	36	9
9.	Live stock management	54	32	14	52	35	13
10.	Farm Mechanization	64	36	10	61	33	6
	Adoption index (%)	43.7	43.6	13.7	42.5	42.7	14.6

C = Complete; P = Partial; N = Nil

Table 3: Constraints for the poor adoption of the technology

Sl. No.	Constraints / problems for poor adoption of technology	% respondents reported
1.	Lack of marketing facility of the farm produce	85
2.	Lack of storage facility	72
3.	Small land holding for use of Tractor drawn implements	80
4.	Unavailability of service provider for tractor, power tiller and large implements	75
5.	Unavailability of improved farm implements	62
6.	Illiteracy of the farmers	65
7.	Water scarcity in hilly areas	78

Table 4: Effect of technology on economics of crop production

Crop	Production cost (Rs./ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
Paddy (Var: Pratikhya)	25,500	46,700	21,200	1.84
Niger (Var: Deomali)	12,000	17,640	5,640	1.40
Turmeric (Var: Roma)	1,60,000	3,50,000	1,70,000	2.19
Ginger (Var: Suprava)	1,46,776	4,35,480	2,88,704	2.96
Groundnut (Var: TMV-2)	38,000	65,000	27,000	1.71
Tamato (Var: Utkal Pragya)	55,180	2,03,830	1,48,650	3.69
Cabbage (Var: Konark)	39,000	1,02,500	63,500	2.80
Brinjal (Var: Bluestar)	56,840	1,85,712	1,28,872	3.26

CONCLUSIONS

Hence, it can be concluded that KVK, Koraput 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 focused on the problems and constraint for adoption of the technology.

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