

## Impact of Training and Demonstration in Adoption of Jute Production Technology by the Farmers

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### ABSTRACT

*Jute is an economically important commercial crop for eastern India. It is cultivated over 0.8 million hectare area producing about 10 million bales (1 bale=180 kg.) of fibre, which is about 40 per cent of world's production. After cotton, the jute is the second most important natural renewable source of bio-degradable fibre. The crop is labour intensive and thus provides subsistence to 12 million farm families. Krishi Vigyan Kendra in Burdwan district under Central Research Institute for Jute and Allied Fibres, Barrackpore is engaged in transfer of technology in jute for last one year. Therefore, an attempt has been made to assess the impact of technologies transferred. The present investigation was based on the experimental design of social research considering beneficiary as experimental group and non-beneficiaries as a control group. It can be concluded that there is significant role of KVK in promotion of improved production practices of jute and ensuring their adoption. Substantial impact of training over the existing knowledge and adoption of the beneficiary farmers than the non-beneficiary farmers was observed.*

**Key words:** *Demonstration; Training Adoption level; Impact*

**J**ute is an economically important commercial crop of our country specially for eastern India. It is cultivated over an area of 0.8 million hectare producing about 10 million bales (1 bale=180 kg.) of fibre which is about 40 percent of world production. After cotton the jute is the second most important natural renewable source of bio-degradable fibre. The crop is labour intensive and thus provides substance to 12 million farm families. The jute industry gives employment to 0.25 million people directly and 2.5 million people in jute based ancillary sector. Besides supplying the domestic consumption, Rs.500-600 crores approximately as foreign exchange is added to the national exchequer by exporting various jute products (Technical bulletin no.1, 2004). The state of West Bengal occupies a place of pride in production of jute, contributing about 80 percent of the total production and more than 70 percent area of the country. The acreage of jute in Burdwan district was 17,786 ha in year 2002-03. (Technical bulletin no.3, 2006). This district has greater potential of jute production due to favourable climatic and soil condition. A Krishi Vigyan Kendra in Burdwan district was established under central research institute for jute and allied fibres, Barrackpore in year 2005. In this order KVK is engaged in transfer of technical know how of agriculture in its operational area for last one year. Therefore, an attempt has been made to assess as how far KVK has been able to promote improved production practices of jute in the area.

### METHODOLOGY

The present investigation was based on the experimental design of social research considering beneficiary as experimental group and non-beneficiaries as a control group. The investigation is confined to purposively selected Burdwan district of West Bengal because it is the jurisdiction area of KVK. For the selection of respondents, 18 trainees (beneficiary) for knowledge level and 6 beneficiaries for adoption level were selected randomly from the list of trainees who participated in training programmes on jute production technology and cultivated the crop during 2006. After selecting beneficiaries, equal number of non-beneficiaries (18+6) was also selected randomly as control group to measure the knowledge and adoption level. Thus in all 48 farmers constituted the sample for this study. In the present investigation the role of KVK was assessed in terms of gain in knowledge and adoption by the beneficiary jute farmers as a result of demonstration and training imparted to them in comparison with non-beneficiary as controlled group. The role was measured in terms of impact index with the help of following formula.

$$\text{Impact index} = \frac{[\text{MIK of beneficiary} - \text{MIK of non-beneficiary}] + [\text{MIA of beneficiary} - \text{MIA of non-beneficiary}]}{2}$$

MIK = Mean Index of Knowledge

MIA = Mean Index of Adoption

Impact (%) change

$$= \frac{\text{Sum of difference of index of knowledge + adoption}}{2}$$

## RESULTS AND DISCUSSION

To measure the knowledge and adoption level about improved production of jute, fourteen important jute cultivation practices were identified and data were collected accordingly.

*Practice wise knowledge and adoption of jute production technology by the beneficiary and non-beneficiary farmers:* The data presented in Table. 1 revealed that all the beneficiary farmers had knowledge about high yielding varieties and method of sowing. Whereas, the 66.67 and 55.56 per cent non-beneficiary farmers had knowledge

about these practices. The beneficiary farmers having knowledge about improved jute production practices viz. Time of sowing, land selection and preparation, recommended seed rate, intercultural operations, irrigation, retting and washing & drying of fiber was 88.89. Whereas, the percentage of non-beneficiary farmers having knowledge about above practices was, 66.67, 61.11, 72.22, 66.67, 72.22, 66.67 and 66.67 respectively. Table-1 shows that the 83.33 percent beneficiary farmers had knowledge about recommended dose of manures and fertilizers, plant protection measures, appropriate time of harvesting and fiber extraction whereas, 61.11, 55.56, 66.67 and 61.11 percent non beneficiary farmers, respectively had knowledge about these practices. The close observation of table showed that the maximum knowledge gap between beneficiary and non-beneficiary was about seed treatment.

Table. 1 Practice wise knowledge and adoption of jute production technology by the beneficiary and non -beneficiary farmers (N=48)

S. No.	Improved Practice	Knowledge				Adoption			
		Beneficiary farmers (n=18)		Non-beneficiary farmers (n=18)		Beneficiary farmers (n=6)		Non-beneficiary farmers (n=6)	
		f	%	f	%	f	%	f	%
1	High yielding varieties	18	100	12	66.67	06	100	03	50
2	Land selection and preparation	16	88.89	11	61.11	05	83.33	03	50
3	Time of sowing	17	94.44	12	66.67	05	83.33	04	66.67
4	Method of sowing	18	100	10	55.56	06	100	00	00
5.	Seed treatment	14	77.78	9	50	04	66.67	02	33.33
6.	Recommended seed rate	16	88.89	13	72.22	06	100	04	66.67
7.	Recommended manures and fertilizer	15	83.33	11	61.11	05	83.33	03	50
8.	Intercultural operation	16	88.89	12	66.67	05	83.33	03	50
9.	Irrigation	16	88.89	13	72.22	05	83.33	02	33.33
10.	Plant protection measures	15	83.33	10	55.56	05	83.33	02	33.33
11.	Appropriate time of harvesting	15	83.33	12	66.67	06	100	03	50
12	Retting	16	88.89	12	66.67	05	83.33	03	50
13	Fiber Extraction	15	83.33	11	61.11	05	83.33	03	50
14	Washing and drying of fiber	16	88.89	12	66.67	05	83.33	04	66.66

In case of adoption, cent percent beneficiary farmers had adopted high yielding varieties, method of sowing, recommended seed rate and appropriate time of harvesting whereas, 50 percent non-beneficiary had adopted the high yielding varieties and appropriate time of harvesting and 66.67 percent had adopted the recommended seed rate. The 83.33 percent beneficiary farmers had adopted the improved practices viz. land selection and preparation, time of sowing, recommended dose of manures and fertilizers, intercultural operations, irrigation, plant protection measures, retting, fiber extraction and washing & drying of fiber. The percentage of non-beneficiary farmers adopting these practices was 50, 66.67, 50, 50, 33.33, 33.33, 50, 50, and 66.66 respectively. The 66.67 percent beneficiary and 33.33 percent non beneficiary farmers had adopted the seed treatment. The table also shows that maximum adoption gap between beneficiaries

and non-beneficiaries exist regarding method of sowing because non beneficiary farmers use the broadcasting method instead of seed drill method.

*Impact of trainings in terms of knowledge and adoption :* The impact of KVK trainings as a whole was computed as the sum total of the differences of both the indices i.e., mean index of knowledge and adoption divided by two. The data thus obtained have been presented in Table 2.

It is evident from Table 2 that there was an impact of training and demonstration was up to the extent of 31.54 percent over the existing knowledge and adoption by the beneficiary which was found to be substantial over the non-beneficiary farmers. Therefore, it could be stated that there was a remarkable impact of the trainings and demonstration on those farmers who attended the training

Table 2. Impact of trainings in terms of knowledge and adoption

S.No.	Particular	Beneficiary	Non-Beneficiary	Difference
1.	Mean knowledge index	88.49	63.49	25.00
2.	Mean adoption index	86.90	48.81	38.09
	Total	175.39	112.3	63.09
3.	Impact (percent) = $\frac{\text{Sum of difference of index}}{2} = 31.54$			

programme and participated in demonstrations conducted by KVK Burdwan in terms of the knowledge about jute production technology and its adoption by them as compared to their counterparts i.e. the farmers who did not participated in the training programmes and demonstrations. The findings are in line with Kumbhare (1996) who reported the significant impact of KVK training on their beneficiaries.

## CONCLUSION

It can be concluded from this investigation that there is significant role of KVK in promotion of improved production practices of jute and ensuring their adoption. It is also could be ascertained that there is substantial impact of training and demonstrations over the existing knowledge and adoption of the beneficiary farmers than the non-beneficiary farmers.

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