Journal of Crop and Weed 8(1): 44-46 (2012)

A micro-level study on farmers approach towards jute cultivation in some selected areas of Nadia district of West Bengal, India

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Received: 30.09.2011, Revised: 20.05.2012, Accepted : 05.06.2012

ABSTRACT

A study was conducted in Krishnagar-II block of Nadia district to measure the awareness of the jute cultivators regarding improved practices and know the attitude of the farmers towards jute cultivation. Additionally, the present study attempted to identify the reasons behind farmers' willingness to stick to jute cultivation. Multi-staged random sampling technique was employed to select forty (40) respondents. Study revealed that farmers were selective to adopt improved farm practices. The respondents appeared to be not aware about various important improved method of cultivation. Simultaneously, they did not show keenness to modernize their cultivation practices. They are still cultivating jute for the (a) lack of availability of alternative remunerative crop, (b) minimization of fuel expenditure (c) provision of employment in a period of otherwise slack agricultural activities (d) possibility of earning some liquid capital.

Key words: Adoption, jute cultivation, willingness

Jute is one of the most important cash crops for over four million farm families engaged in its cultivation. The jute industry employs over two lakh workers. Ancillary activities account for another 27 lakh (Anon., 2006). So jute plays an important role both in rural and industrial economy. Ever increasing demand of food crops due to demographic pressure led to shrinkage of jute acreage (Talukder *et al.*, 1985). Moreover, the production of jute in India, China, Thailand and Nepal has shown general decline during the period from 1990 onwards (FAO, 1993 and 2000). The probable reasons of such decline may be due to the non-remunerative price of jute, low intervention of public sector in primary market of jute (Hussain *et al.*, 2002) and unfavourable jute price in the jute-rice price scenario (Azad *et al.*, 2002) which may lead to lower interest and willingness to adopt costly and improved production practices of jute. With this backdrop, the present study was undertaken in some selected villages of Krishnanagar-II Block of Nadia district. The objectives of the study were i) to know the present status of adoption of improved techniques of jute production and reasons behind the selective adoption and ii) to assess the willingness towards adoption of improved jute production technology.

MATERIALS AND METHODS

Krishnanagar-II Block was purposively selected considering the abundance of jute cultivators and convenience of the researchers. Two villages were randomly selected from the Block. 20 (twenty) farmers were again selected by random sampling from each village consisting of 40 (forty) farmers as the sample of respondents meant for the study. A pre-tested and comprehensive schedule was employed to collect information from the respondents covering various dimensions of the present study.

To assess the adoption level of improved production technology of jute in the study area, adoption index developed by Bose (1965) was modified somewhat and used in this study. The modified index was expressed as follows:

$$\textit{Overall Adoption Index} = \frac{\sum_{i=1}^{K} ni}{K.N}$$

Where,

ni=No. of adopters of *i*th technology

K=Total no. of technology

N=Total no. of farmers

RESULTS AND DISCUSSION

Majority of the respondents (75 percent) used improved varieties though they were reluctant (only 27.5 percent) to adopt line sowing method. Non-adoption of seed-drill (20 percent usurers) was also prominent in the investigation (Table 1). The method of retting generally determines the fibre quality. Though use of banana leaf as a covering substance is not advised, ten percent (10) of the jute cultivators were found to have used it. Similarly a considerable portion of the farming community (32.5 percent) were found to have used bamboo stem or earthen clod, known to have adverse effect on fibre quality, as weighing-down material. It was also highlighted that the selected farmers had not been accustomed (35 percent) to use activators in retting (Table 1). As single plant extraction is a cumbersome and labour consuming process, the respondents rather preferred to extract fibre through beat-break jerk method (72.5 percent).

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Table 1: Adoption status and prime causes for partial adoption (N=40)

Sl. No.	Technology	No. of Adopters	Prime Causes for Partial Adoption
1.	Variety		
	(a) Improved	30 (75)	• Unawareness
	(b) Traditional	10 (25)	
2.	Methods of sowing		• Unavailability of improved technology like seed drill
	(a) Line	11 (27.5)	
	(b) Broadcasting	29 (72.5)	
3.	Place of retting		
	(a) Tank	7 (17.5)	• Lack of infrastructure facility like retting tank or individual pond or flowing water
	(b) Small pond	33 (82.5)	
4.	Covering material		
	(a) Paddy straw	30 (75)	• Lack of financial support by the Government institutions
	(b) Banana leaves	10 (25)	
5.	Weighing down material		
	(a) Concrete slab/ bamboo crating	27 (67.5)	
	(b) Banana stem/earthen clod	13 (32.5)	• Not much remunerative at present
6.	Activators		
	(a) Urea/ dhaincha/ sunhemp	14 (35)	
	(b) Nothing	26 (65)	• Easy availability of local technology
7.	Retting water		
	(a) Streamline flow	12 (30)	
	(b) Stagnant	28 (70)	• Lack of availability
8.	Method of extraction		
	(a) Single plant	11 (27.5)	• Method is cumbersome
	(b) Beat break jerk	29 (72.5)	
9.	Stage of harvesting		
	(a) Small pod stage	3 (7.5)	• Lack of awareness
	(b) Before small pod	37 (92.5)	**Overall adoption Index: 40.27**

Note: (a) Recommended/improved practices; (b)=traditional practices. Figures in the parentheses indicate percentage

Table 2: Willingness towards adoption (N=40)

Sl. No.	Technology	Frequency (%)
1.	Willing to increase area for jute in the next year	4 (10.0)
2.	Willing to divert jute to alternative crop	26 (65.0)
3.	Willing to use seed-drill	8 (20.0)
4.	Willing to use sprayer or wheel-hoe	13 (32.5)
5.	Willing to use plant protection chemicals	11 (27.5)
6.	Willing to use herbicides	2 (5.0)
7.	Willing to use of fungal culture	6 (15.0)
8.	Willing to re-excavate retting tank or pond	24 (60.0)

Note: Figures in the parentheses indicate percentage

The numbers of ponds available for retting being minimum, farmers were utilizing ponds on community basis, and the retting in the water with stagnant flow was found to be a common practice (70%, Table 1). It was observed from the table-2 that only 10% respondents are willing to increase their jute coverage while majority of farmers (65 percent) were in favour of crop diversion provided they find alternative remunerative crop. It was clear during the course that a significant number of respondents didn't consider jute as a remunerative crop. Yet they are cultivating it due to lack of alternative crops. They were also not interested to use improved agricultural implements like seed-drill, wheel-hoe etc. (Table 2). Farmers of the locality did not feel the need to adopt plant protection measure due to infrequent pest and disease incidence. Only 27.5 percent of the respondents were found to have willingness to apply plant protection chemicals in their jute field. Hand weeding being popular, the number of farmers willing to use herbicides was only 5 % of the respondents. A significant number of jute cultivators (60%) expressed their desire to re-excavate retting tank, provided they get necessary financial support (Table 2). The

government agency is recently trying to introduce fungal culture to improve fibre quality. Though only a small segment of the farming community (15 %) showed keenness to adopt this practice, its popularity could be increased if more emphasis on awareness programme is given (Table 2).

The overall adoption Index (40.27) indicates that the farmers of the study area could not even cross 50% adoption level. From the preceding discussion it is clear that farmers of the survey area were selective to adopt the improved farm practices. They had started to use improved seeds but were resistant to use seed-drill or to practise line-sowing method. Their approach towards retting process was not scientific. They often used banana stem as covering substance or earthen clod as weighing-down material whose capacity to damage the fibre quality is well known. But the farmers of the selected survey area were probably unaware of these facts.

It is clear from the present study, that they are still practising traditional method barring some exceptions. There are lot of things need to be done to increase the productivity of jute. Government and other development agencies should try to reach the farming community with necessary technical and financial support. If farmers become assured of getting remunerative prices, they will surely show keenness to modernize their cultivation practices.

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