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RESEARCH ARTICLE

LIVELIHOOD OPPORTUNITY THROUGH JUTE CULTIVATION IN TRIPURA, INDIA

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ABSTRACT

The study was conducted in the state of Tripura during the year 2014. The aim of the survey was to document the income opportunity to the Jute growers and the person associated with making of jute products i.e. craftsmen in Hapania Jute cluster (Cooperative society). The people of the area are getting involved in Tripura Jute Mill Ltd and taking interest in the Co-operative Society which is helping them in developing their socio-economy. Annually each family involved in production of jute fiber has earned Rs 4,119 from Tripura jute Mill Ltd. Craftsmen in Hapania Jute cluster (Cooperative society) has earned averaged profit of Rs 2,750 per month hence, 33,000 per year per person. Jute cultivator of the Tripura had a secure purchaser for their raw material. But in Tripura, the local cultivators has lost interest in growing jute as they prefer other cultivation like rubbers which seems to be far more profitable to them. Thus, it is prime important to analyze the fiber yield production status of the beneficiary farmers and provide them with better management.

INTRODUCTION

Jute is a long, soft, shiny vegetable fiber that can be spun into coarse, strong threads known as golden fiber. It is extracted from the bark of the plants of genus *Corchorus* (family Sparrmanniaceae). Jute is an annual crop taking about 120 days (April/May-July/August) to grow. Jute is a rainfed crop with little need for fertilizer & pesticides. It is one of the most affordable natural fibers and considered second only to cotton in amount produced and variety of uses of vegetable fibers (www.fao.org). It is an environmental friendly & versatile fiber. The jute fibre is also known as Pat, Kosta, Nalita, Bimli or Mesta. Cultivation of raw jute crop provides not only fiber which has industrial use, but jute stick which is used as fuel and building material by the farming community. India is the largest producer of jute goods in the world, while Bangladesh is the largest cultivator of raw jute. The cultivation of Jute in India is mainly confined to the eastern region states West Bengal, Bihar, Assam, Tripura, Meghalaya, Orrissa and Uttar Pradesh (www.jutecomm.gov.in). Local communities may be engaged in a variety of livelihood strategies in using natural fibers & NTFPs. High-value fibers & NTFPs offer good scope for income generation within a diversification or specialization strategy (Shackleton *et al*., 2008).

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Their production normally is a component of a multi-enterprise livelihood system including also farming activities. The income earning opportunities from NTFPs are often greater in areas with forested landscapes consisting of a mosaic of forest and agricultural lands rather than remote forests areas (Ros-Tonen and Wiersum, 2005). The Jute industry occupies an important place in the national economy of India. There are 78 jute mills in India. It is estimated that the jute industry provides direct employment to 0.37 million workers in organized mills and in diversified units and supports the livelihood of around 4.0 million farm families in India. In addition there are a large number of persons engaged in the trade of jute (Sen *et al*., 2008). Food and Agriculture Organization (FAO) has declared year 2009 as the International Year for Natural Fibers considering, particularly, their environmental significance. Jute is a commercial fiber crop, which plays a significant role in the economy of a number of Asian countries like, India, Nepal, Thailand, China and Myanmar. About 4 million farmers, 0.25 million industrial workers and 0.5 million traders find gainful employment in jute sectors. About 60 per cent of the raw jute in the world is produced in India (Sen *et al*., 2006). It generates about 10 million working man days annually and around 32 lakh farm families seek their livelihood by cultivating jute in the country. Thus, raw jute (jute + mesta together) farming, industry and trade support livelihood to 14 million people (Das *et al*., 2006). Apart of it, the jute industry also contribute to

the export earning to the tune of nearly 1200 crore of rupees yearly (Karmakar *et al*., 2008). Bumper crops of jute, cotton and other commodities, against prices dwindling below the cost of production, the agricultural population found themselves in a more or less hopeless position in Tripura (Bhattacharjee *et al*., 1936). However, the role of natural fibers like jute in direct employment to the cultivators is been studied but actual income gained by such resources is not studied so far for the state like Tripura where number of farmers are associated with jute industry i.e. Tripura Jute Mills Ltd & Co-operative society. The people of India know jute as a source of fiber and it is used for making sacks at least from 16th century. It has become a source of livelihood for million people and is deep rooted socio-culturally. Hence, it felt essential to study the impact of jute industry on income gained and ultimately on the farmer's livelihood.

MATERIALS AND METHODS

Tripura is one of the seven states in the north eastern part of India located between $22^{O}56'$ & 24^{O} 32' North latitude and between 90^{O} 09'& 92^{O} 20' East latitude. Tripura is among the smaller States in the North Eastern Region, with a total area of about 10,492 Sq. Km. and, out of which more than 60% area is hilly and forested (Census report 2013). The cultivated area is about 27% only. The State gets fairly high annual rainfall of about 210 cm, well spread over the year. Extensive survey was conducted to gather the required information with the help of well structured questioneer. Survey was carried out in the three phases & information on working, associated people, raw material procurement, products, market etc was gathered from the Tripura Jute Mill Ltd. officials, Cooperative society personnel's and the jute cultivators/craft persons. In first phase visit to the Tripura Jute Mill was conducted. Then, information was collected from Co-operative Society as a second phase of work and in third phase craft person associated with Jute mill and Co-operative society were interviewed. Local language was used to conduct interviews. Collected information through questioners was interpreted to fulfill the objective of study. Tripura Jute Mills Limited (A Government of Tripura Undertaking) is situated at Hapania, Badarghat (West Tripura). It was registered on 10^{th} October, 1974. Tripura Jute Mills Limited's Corporate Identification Number (CIN) is U17119TR1974SGC001589, Registration Number is 001589. The industry covers total 56 hectare of area and does not have their own plantation of jute. The industry has 1016 number of employees, 19 number employees were temporary (where males were 11 in numbers and female were 18 in number) and 997 number of employees are permanent.

The cooperative society which is named as Hapania Jute Cluster Co-operative Society Ltd was established in the year 1995 with a few group of women with approval given by the Tripura Social Welfare Board to organize and undertake training in village industries for the welfare of the members of the society.

RESULTS

Most of the activities of human being are related with their livelihood. Sources of income generation and utilization of resources for monetary gain are the central focus in this process. Farmers' economical condition is much dependable on their agricultural production. High productivity of their crops resulted into more benefits in terms of cash, which has influence on their livelihood and investment for further income enhancement endeavors. Quantity of jute fiber yield production has a major role in its profitability. It was prime important to analyze the fiber yield production status of the beneficiary farmers. But in Tripura, the local cultivators has lost interest in growing jute as they prefer other cultivation like rubbers which are far more profitable to them. For this reason, Tripura Jute Mills Ltd has failed to reach its expectation for various economical reasons. The local Jute cultivator has opted to other sources which has lead to the jute mills purchase/import jute from other state of India.

Grading of jute fiber

The process of classification of the fiber quality on the basis of the physical properties of unsorted jute fiber is called Jute Grading. It is a process of establishment of certain standards based on the intrinsic physical properties of the fiber with a view to sub-divide it into several grades or classes. Tripura Jute Mills Limited has graded the jute fiber on the bases of length, strength, fineness, lusture and color. Raw jute is classified according to quality of jute and its application. *Corchorus capsularis* fiber was named as white jute and 8 grades were given to the white jute. The fine quality white raw jute is graded as W1, W2, W3, W4, W5, W6, W7 to W8. The Tossa jute (*Corchorus olitorius*) was available in 8 grades. And it was graded as TD-1, TD-2, TD-3, TD-4, TD-5, TD-6, TD-7, TD-8. Mesta jute is available in 6 grades as M-1, M-2, M-3, M-4, M-5, M-6. Jute fiber was graded into 22 types and out of it TD-5 Tossa jute & TD-6 Tossa jute were commercially exploited by the Mill as it was suitable only for the products were made in the mill.

Raw material: Source and price

The collected data (Table 1) showed that Tripura Jute Mill has procured raw material in a form of fiber from local farmers, Jute corporation of India and also from Assam state. Tripura Jute Mill has purchased 15000 quintal jute fiber from the local farmer and same amount from the JCI (Jute Corporation of India) at the rate of Rs 2746/quintal. The quantity purchase from Assam was higher than indigenous purchase i.e. of 125000 quintal jute fiber. The cost price of outside of the state was also higher comparing to the local farmers and JCI. The price given to outside state was recorded as 3450/quintal.

Table 1. Import index of jute by Tripura Jute Mill Ltd in 2013-2014

Source	Form(fiber/thread/ semi-prepared)	Quantity (q)	Price	Total price (crore)
Local farmer	Fiber	15000	2746/quintal for TD5	4.119
Outside of the state (Assam)	Fiber	125000	3450/quintal for TD5	43.125
Jute corporation of India	Fiber	15000	2746/quintal for TD5	4.119

Production from the mill

Total of eight kinds of product were being prepared in Tripura Jute Mills Limited, i.e. B. twill gunny bag, seed bags, 3ply twin, hessian cloth, tea bag, packsheet, mat cloth and potato bag (Table 2). Former three products were the regular products and later five products were prepared only when order placed for them. Generally ONGC office placed order for the products to the Tripura Jute mill. Among all the products price of 3 ply twin, pack sheet & mat cloth was almost same i.e. 52.80/kg, Rs 53.80/kg & Rs 52.80/kg, respectively. Among the different type of bags tea bag was sold in the highest price i.e. Rs 47/piece followed by B.twill gunny bag with price Rs 38.76/bags, seedbag having selling price Rs 30.50/ piece and potato bag with price Rs 25/piece. Hessian cloth was priced as Rs 44.10/m whereas matcloth sold out in Kg at the rate of Rs 52.80 per Kg. The final products which are being made in the mill has to be sold to the various food grain procurement agency/organization. Food Corporation of India (FCI) also purchase products from Tripura Jute Mill Limited. Final products specially sack are also being exported to the various state like Punjab, Haryana, Madhya Pradesh etc. Products are also being purchased from the agriculture department.

Table 2. Type of jute products and there selling price at Hapania Jute Mills Ltd

S. No.	Products	Selling price (INR)	Category
1.	B. twill gunny bag	3875.89/100 bags	Regular products
2.	Seed bag	30.50/bag	Regular products
3.	3 ply twin	52.80/kg	Regular products
4.	Hessian cloth	44.10/mt	Irregular products
5.	Tea bag	47/piece	Irregular products
6.	Pack sheet	53.65/kg	Irregular products
7.	Mat cloth	52.80/kg	Irregular products
8.	Potato bag	25/bag	Irregular products

Hapania Jute cluster Co-operative Society Ltd

At present 350 women and 2 men were working there along with one each of Joint secretary, secretary, President and Treasurer. All the members hailed from Tripura. One of the objective of cooperative society is to provide training in handicraft, tailoring for various things, handlooming, dyeing, stitching etc. Co-operataive society procured jute in the form of thread from Tripura Jute Mills Ltd. and from out of state like from Silchar (Assam).

Products prepared by Hapania Jute cluster Co-operative Society Ltd

Hapania Jute Cluster Co-operative Society Limited prepared five different products from jute (Table 3).

Table 3. Products of jute prepared by Hapania Jute cluster Co-operative Society Ltd

S. No.	Product	Quantity/month	Cost/unit
1	Bags(all kinds)	7000	Rs20-400
2	Folder	500	Rs100-300
3	Wall hanging	100-200	Rs100-200
4	Sofa cover	Prepared on order	Rs300/piece
5	Carpet	Prepared on order	Rs600-2,000/piece

Among all the products, carpet was the highest priced product and cost ranged from Rs600-2000/piece. All kind of bag including hand bag, purse, mobile bag and carry bag were the highly demanded products. These bags cost between Rs 20-400/piece. Folder priced between Rs100-300/piece, wall hanging Rs100-200 and sofa cover Rs300/piece.

Impact on the livelihood of associated farmers

The study revealed that Tripura Jute mill Ltd along with the cooperative society has provided direct employment to the 1366 person and average of 152 families. Jute mill also procured jute fibers from the local farmers as a raw material for production, average of 1,000 families were involved in supply of raw material. In the financial year 2013-14 Tripura jute Mill Ltd has purchased raw material of value Rs 4.119 crore from local farmers. Hence, per year each family involved in production of jute fiber has earned Rs 4,119 from Tripura jute Mill Ltd. The mill also procured raw material of Rs4.119 crore from Jute Coorporation of India (JCI). The JCI is an agency of Government of India, it assists jute cultivation and provide minimum support price to the cultivators. Thus indirectly Tripura Jute mill Ltd also providing income opportunity to the farmers those are associated with JCI. However it's actual extent was not covered in the present study. Present study showed that the person associated with making of jute products i.e. craftsmen in Hapania Jute cluster (Cooperative society) has earned averaged profit of Rs 2,750 per month hence, 33,000 per year per person. The annual outturn in last 3years for cooperative society was Rs 6lakhs. Thus it can be concluded from the collected information that jute cultivator of the Tripura has a secure purchaser for their raw material. Hence, there is problem related to the market of cultivated jute is nullified and if farmers will be encouraged, it will enhance the livelihood opportunity.

DISCUSSION

The result shows that jute crop plays crucial role in the farmer's livelihood by providing monetary benefits. Tripura Jute mill Ltd along with the cooperative society has provided direct employment to fulfill their daily needs as well as they had been able to enhance their living standard from this extra income. It was revealed that jute is not only a commercial crop but also socio-culturally important to the farmers. It helps them to generates family employment. It was also revealed that people of the area are getting involved and taking interest in the Co-operative Society which is helping them in developing their socio-economy. Das *et al.,* (2013) studied that the Jute has an important position in the packaging world for many years due to its cheapness, hardwearing properties and biodegradability. The fiber, which spins into the fine yarn, is considered to be of very good quality. Ros-Tonen and Wiersum, (2005) has revealed that NTFP production normally is a component of a multi-enterprise livelihood system including also farming activities. The income earning opportunities from NTFPs are often greater in areas with forested landscapes consisting of a mosaic of forest and agricultural lands rather than remote forests areas. Quality of jute determines its end uses. It was prime important to analyze the fibre yield production status of the beneficiary farmers. For diversification of jute products supply of superior and fine quality of fiber has to be ensured. Thus improvement of quality of jute fiber has assumed much importance in the recent times.

High productivity of their crops resulted in to more benefits in terms of cash, which has influence on their livelihood and investment for further income enhancement endeavors. Quantity of jute fibre yield production has a major role in its profitability. High-value products tend to be managed intensively and yield substantially higher incomes than those generated by the less specialized producers of less-managed, low value products Ruiz-Perez *et al*. (2004); Belcher *et al*. (2005). So, the farmers are going towards rubber plantation in Tripura. There is a need to develop much more location- and product-specific approach, in which not only attention is given to the ecological characteristics of specific product, but also to the nature of management practices and value chains (Belcher and Schreckenberg, 2007; Shackleton *et al*., 2011).

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