

Status and Achievements of Sericulture in Bodoland Territorial Area Districts (BTAD), Assam: A Study

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ABSTRACT

Sericulture, the technique of rearing silkworms for obtaining cocoons and finally raw silk is an age-old avocation among the rural masses especially the tribal community in Bodoland Territorial Area Districts (BTAD) of Assam that constitutes four districts, viz., Kokrajhar, Chirang, Baksa and Udalguri. Among the four varieties of sericulture, three, namely, eri, muga and mulberry are being practiced in this area. Sericulture is extensively practiced in comparison to muga and mulberry. Its share in employment generation and production as well as productivity are relatively more than the other two components. In this paper, an attempt is made for comparative study on the families engaged including category wise in different sub-sectors of sericulture and production of cocoon as well as raw silk of the three components of sericulture in the four districts of BTAD along with highlighting the achievements made so far by the BTC Sericulture Department. Secondary data, collected from various sources of information are arranged in tabular form and analyzed accordingly to fulfill the objectives set for the study.

Keywords: sericulture, employment, raw silk, production, BTAD

INTRODUCTION

Sericulture is an agro-based economic activity, the end product of which is silk, “the queen of fabrics” (Das, 2009). Sericulture, the technique of silk production, is an agro-based labour-intensive cottage industry providing gainful employment and generation of income to weaker sections of people in the rural and semi urban areas (Kherkatary *et al*, 2017). Since its discovery, sericulture has been playing an important role in the socio-economic life of the people. Sericulture as a whole involves a series of economic activities like cultivation of silk worm food plants, seed production, rearing of silk

worm for production of cocoons. The post cocoon activities involved reeling-spinning, twisting, dyeing, weaving, printing, finishing and processing of silk fabrics. Some unique features of the silk sector are its rural nature, agro based, ecologically and economically sustainable activity for the poor, small and marginal farmers, agriculture labour and women in particular. Many studies indicate that 60 percent of the activities in the pre-cocoon and post-cocoon sectors are carried out by women. The researchers argue that sericulture can uplift the socio-economic status of women in the society particularly in rural area.

There are generally four types of com-

mercially exploited silk i.e., mulberry, eri, muga and tasar, each of which is produced by a distinct variety of silkworm like-

1. Mulberry silkworm (*Bombyx mori*)
2. Eri/Endi silkworm (*Philosamia ricini* or *P. cynthia*),
3. Muga silkworm (*Antheraea assamensis*) and
4. Tasar silkworm (*Antheraea mylitta* or *A. Pernyi*).

Table 1. Types of Silk and Its Respective Host Plants

Name of Silkworm	Main Host Plant/plants
Muga Silkworm	Som, Soalu
Eri Silkworm	Castor, Kesseru
Mulberry Silkworm	Mulberry
Tasar Silkworm/ Oak Tasar Silkworm	Asan, Arjun, Oak

Source: Das, 2009

REVIEW OF LITERATURE

Choudhury (1992) stated that sericulture and silk production are highly labour intensive operations besides being employment-oriented involving low capital investment ideally suited to a labour abundance environment where agriculture is the mainstay. It has the inherent ability to generate regular incomes for rural mass.

FAO (1976) opines that the net profit earned from a unit land through sericulture is more than any other agricultural or commercial crops, especially in developing and underdeveloped countries where the average income is low. The product of the land is mulberry leaf, which is converted into raw silk by rearing silkworms and the extraction of silk, both of which require large labour force. The quantity of silk produced varies from 20 to 120 kg per hectare. While even ap-

proximate monetary comparisons are difficult to make, the value of silk is obviously greater than the rice, sugarcane or any other crops produced per unit area of land.

Bhattacharjee *et al* (2013) estimated that sericulture can generate employment @11 mandays per kg of mulberry raw silk production in on-farm and off-farm activities throughout the year. Again, they also estimated that one man-year employment is generated by producing one kg of Vanya silk, which means that one family in Vanya sector can get sustainable employment and livelihood if they produce just 1.0 kg of Vanya raw silk.

Pandey (2003) in his study states that the silk industry in Assam is one of the major contributors to state revenue. It is also a major source of employment particularly in rural areas. Eri contributes Rs. 31.5 crore, whereas muga contributes Rs. 40 crore, pat silk contributes Rs. 120 crores out of a total of Rs. 190 crores generated annually through the silk industry in Assam.

Borah and Mech (2001-2002) studied on socio-economic status of muga farmers by conducting a survey in six major muga growing districts of Assam covering 298 muga farmers in 2000-01. They found that the average area under sericulture plantation per farmer ranges between 1.74 to 3.23 bighas. The average income per farmer from sericulture was found in between Rs.3563 and Rs.9240.

BTAD: A Brief Profile

Bodoland Territorial Area Districts (BTAD) or Bodoland Territorial Region (BTR) popularly known as Bodoland, the gateway to the most beautiful North Eastern Region (NER) of India, is located extreme north of north bank of river Brahmaputra in the state of Assam; inhabited predominantly by the Bodo language speaking ethnic group and Bengalis, Assamese, Rabha,

Garo, Koch-Rajbongshi, Nepali, Adibasi, Santhal and other indigenous Mongoloid tribes having four districts viz. Kokrajhar, Chirang, Baksa and Udalguri. It is an autonomous administrative unit constituted under the Sixth Schedule of the Constitution of India covering an area of 8821.68 km (Provisional) that constitutes almost 11.25 percent of total land area of the state. Of this total land area, Kokrajhar occupies 3165.44 sq. km. (36.0 percent), Chirang 1974.8 sq. km. (22.0 percent), Baksa 2007.5 sq. km (23.0 percent) and Udalguri 1673.94 sq. km. (19 percent). Thus, Kokrajhar occupies the largest land area among the districts of BTR.

The geographical boundary of BTR lies between 260 7'12" N to 260 47' 50" N Latitude and 890 47' 40" E to 920 18' 30" E Longitude and is in the North Western part of Assam. Kokrajhar town, the Administrative Head Quarter lies roughly between 260 25' N Longitude and 990 16' 38" E Latitude.

Out of total population of 3151047 of BTAD, 3010953 (95.55 percent) live in rural areas and 140094 (4.45) live in urban (Census of India, 2011). If we look at the district level of BTAD, Baksa district with 98.71 per cent of rural population occupies highest followed by Udalguri with 95.48 percent. These rural populations are characterized by mass poverty, low levels of literacy, income, high level of unemployment, poor nutrition and health status. About 90 percent of the total population of BTAD are directly or indirectly dependent on agriculture and allied activities.

OBJECTIVES OF THE STUDY

1. To make a comparative study on status among the three varieties of sericulture in BTAD.
2. To investigate the total employment including category wise of seri-farmers in the four districts of BTAD.

3. To highlight the achievements of BTC sericulture department

MATERIALS AND METHODS

The study is carried out on the basis of secondary sources of information collected from different publications of the Government agencies like, Directorate of economics and Statistics, Directorate of Sericulture, (Government of Assam), Central Silk Board, Directorate of Sericulture, (BTC, Kokrajhar). Data are arranged in tabular form analyzed accordingly to fulfill the objectives set for the study.

RESULTS AND DISCUSSION

Present Status of Sericulture in BTAD

Sericulture, the technique of rearing silkworms for obtaining cocoons and finally raw silk is an age-old avocation among the rural masses especially the tribal community in Bodoland Territorial Area Districts (BTAD) of Assam. Among the four types of sericulture three viz., eri, muga and mulberry are being practiced in the four districts of Bodoland. Sericulture is extensively practiced in comparison to muga and mulberry. Its share in employment generation and production are relatively more than the other two components. The agro-climatic condition of the districts is suitable for sericulture and the availability of labour specially the women and their skill also provide scope for its expansion and development.

Table 2 shows the priority accorded to various sub sectors of sericulture in BTAD by the Department of Sericulture. On the priority basis, the first priority is accorded to eri sector, second and third priorities to muga and mulberry respectively as regards to sericulture development in the BTAD area.

Table 2. Priority accorded to Sub sectors of Sericulture in BTAD

Serial No.	Sector	Priority
1	Eri	I
2	Muga	II
3	Mulberry	III

Source: Director of Sericulture, BTC, Kokrajhar

Table 3. Nos. of Sericulture Villages and family engaged in Sericulture in BTR, 2018-19

Sl. No	Districts	Nos. of Sericulture Villages	Nos. of Families Engaged			Total
			Eri	Muga	Mulberry	
1	Kokrajhar	478	10763	624	202	11589
2	Chirang	257	6540	693	139	7372
3	Baksa	408	10831	816	492	12139
4	Udalguri	515	11978	487	739	13204
Total BTR		1658	40112 (90.54%)	2620 (5.91%)	1572 (3.55%)	44304

Source: Statistical Hand Book of BTC, Kokrajhar, 2018-19

Table 4. Category wise Seri farmers, 2015-16

District	SC			ST			Other			Total
	Eri	Muga	Mulberry	Eri	Muga	Mulberry	Eri	Muga	Mulberry	
Kokrajhar	920	40	23	12270	510	300	2146	88	53	16350
Chirang	480	26	05	6420	348	66	1122	58	11	8536
Baksa	780	25	07	10350	320	100	1808	57	17	13464
Udalguri	590	30	13	9180	380	175	1603	59	30	12060
Total BTAD	2770	121	48	38220	1558	641	6679	262	111	50410

Source: Director of Sericulture, BTC, Kokrajhar

Table 3 reveals the fact that out of the total 3066 villages (Population Census, 2011) in BTR; sericulture is being practiced in 1658 villages (Kokrajhar-478, Chirang-257, Baksa-408 and Udalguri-515) in 2018-19. The total number of families engaged in sericulture is found 44304, of this, in eri 40112 (90.54 percent), in muga 2620

(5.91 percent) and in mulberry 1572 (3.55percent). Thus, among the three components, endiculture dominates in providing employment to the rural people in the four districts of Bodoland. If we assume 3 members engaged per family then the total employment created by the sericulture industry would be 132912.

Table 5. Yield of Cocoons and Production of Silk Yarn in BTR, 2018-19

Sl. No.	Districts	Yield of Cocoons			Production of Silk Yarn		
		Eri (MT)	Muga (Lakh Number)	Mulberry (MT)	Eri Silk (MT)	Muga Silk (MT)	Mulberry Silk (MT)
1	Kokrajhar	402.48	488.50	17.50	321.98	9.77	1.75
2	Chirang	151.85	339.00	13.90	201.48	6.78	1.39
3	Baksa	401.29	584.50	59.30	321.03	11.69	5.93
4	Udalguri	445.00	387.00	60.70	356.00	7.74	8.07
Total BTAD		1500.61	1799	171.40	1200.49	35.98	17.14

Source: Statistical Hand Book of BTC, Kokrajhar, 2018-19

Table 6. Total Area covered for Food Plant

Sl.No.	Sector	Food Plant Area (in Acres)
1	Eri	38,142
2	Muga	2,379
3	Mulberry	1,333
Total		41,854

Source: Silk in BTC, Dipartment of Sericulture, Kokrajhar, 2020-21

Table 4 reveals category wise (SC, ST and Others) seri farmers in BTAD for the year 2015-16. Out of total 50410 seri farmers in BTAD, Schedule Caste seri farmers is 2770 in eri, 121 in muga and 48 in mulberries. The engagement of Scheduled Tribe in BTAD in eri- 38220, in muga 1558 and in mulberry 641. For others including general category, in eri 6679, in muga 262 and in mulberry 111. Thus, again, employment generation is more in eri sector to all categories in BTAD.

The total production of eri cut cocoon was 1500.61 (MT), muga was 1799 lakh and Mulberry cocoon was 171.40 (MT) in BTR in the year 2018-19 (Table 5). Out of the total production of silk yarn 1253.61 (MT), the contribution of eri silk was 1200.49 matric tone (95.76 percent) muga was

35.98 matric tone (2.87 percent) and mulberry silk was 17.14 matric tone (1.37 percent) in 1018-19. Again, lion's share to total silk yarn from eri sector is observed. Thus, eri sector is dominating the sericulture industry in BTR.

As on 2021-21, a total land area of 41,854 acres is covered under eri (38,142 acres), muga (2379 acres) and mulberry(1333 acres) silkworm food plant including Government and private sector in BTC as per Sector -wise breakup indicated in table 6.

Major achievements of BTC Sericulture Department

Before creation of Bodoland Territorial Council (2003-04), sericulture was considered as poor man's occupation and production of raw silk

was hardly 100 MT. However, just after establishment of the Bodoland Territorial Council on 10th February, 2003, the Department of Sericulture, BTC in association (collaboration) with Central Silk Board, Ministry of Textiles, Govt. of India prepared a “Perspective Plan” for a period of 10 years to address all the gaps and constraints and launches an Integrated Sericulture Development Project entitled “Project Thaokhri” with the financial assistance from Central Silk Board, Ministry of Textiles, Govt. of India during the year 2004-05 which was the beginning of the Golden era of Silk industry in BTC. Due to the concerted effort made by the Department of Sericulture and assistance provided by Central Silk Board and Ministry of Textiles, Government of India to streamline the sericulture sector, made a remarkable impact for overall progress in silk industry in BTC area. Some of the major achievements are-

- Established 1st Vanya Cocoon Bank at Udalguri.
- Established Eri Spun Silk Mill in Kokrajhar
- Established 1st Muga Wildlife Sanctuary in Chirang.
- Established an Automatic Silk Knitting Unit at Kokrajhar.
- Established Automatic Digital Silk Printing & Processing Unit at Kokrajhar.
- Established a Bodoland Silk Park at Kokrajhar.
- Introduced Root Trainer Technology in nursery under Soil to Silk project at Udalguri.
- Adoption of cleanliness Seri-village.
- To promote the marketing, Sericulture Department has launched Brand in the name of ‘Bodoland Silk’.
- Established a Vanya Silk Shoppe at August

Kranti Bhawan, New Delhi.

- Established Multiend Reeling & Twisting Unit at Udalguri.
- Adoption of mechanization on-farm & non-farm sector.
- Introduced mulberry plantation & established a Mulberry Grainage in BTC.
- Pupae processing unit.
- Incubation centre in Eri sector.
- Tapioca project.
- Geo Tagging and GIS mapping
- Established 5 nos. of Ambar Charkha unit under Soil to Silk project at Udalguri.
- Established CFC for Weavers at Udalguri.

CONCLUSION

BTAD can excel as a model area in Assam in silk production specially the eri silk. It can emerge as the most important opportunity in creation of employment and income generation in the four districts of BTR. Considering the high potential and suitable environment for the development of this industry, it is the time on the part of the governments: central, state, BTC Government and the concerned departments to prepare comprehensive schemes and policies so that it can attain the full commercial viability at its earliest and become a source of socio-economic development in BTR. The unemployed youths who are the main cause of creating instability in our society are to be motivated so that they can be self-employed through adoption and practice of sericulture that has been prevalent in Bodo society since time immemorial. As majority of workers engaged in sericulture specially ericulture are women, special training be imparted and facilities should be extended to them so that they would be encouraged and come for-

ward for the actual development of this industry resulting improvement in their standard of living and status in the society.

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