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Role of Silk as a Remunerative Cash Crop of Murshidabad, West Bengal

Abhirupa Chatterjee* and Sangyu Yaden

Nagaland University, Lumami, India

**Corresponding author*

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A B S T R A C T

Silk, the "Queen of Textiles" is an inseparable part of Indian culture and tradition over thousands of year. The internal high market demand makes India, the largest silk consuming country as no ritual is completed here without it, and the second largest silk producing country of the world with more than 18% to the world's silk production. Being an agro-based industry, this sector includes both agricultural and industrial aspects and thus refers to the work started from mulberry cultivation, silk worm rearing, and obtaining silk up to the making of finished silk product. Indian climate is appropriate for the production of all the varieties of silk called Mulberry, Tasar, Muga and Eri and among these Mulberry silk is the most renowned and popular form of silk. This industry helps in shaping the economic destiny of the rural people especially for the overpopulated rural economy based country like India as it mainly depends on human power and helps in poverty alleviation whereas, being retreated from the developed countries because of the increasing labour cost. It is appropriate for both marginal and small scale land holders because of its low investment and high assured return at regular interval. In West Bengal, Silk industry plays a significant economic role by providing employment over 1.2lakhs rural families round the year (Seri States Profile, 2019). The district Murshidabad of West Bengal is well equipped in both the production and weaving of mulberry silk and so as a matter of fact the silk industry of the state mainly goes by the name of 'Murshidabad Silk' as the silk weaving belts are confined around this district. This paper intends to analyse the importance of silk as a remunerative cash crop of Murshidabad.

Introduction

An increasing curve of population growth creates problem like unemployment which has become a rising concern in an over populated country like India. Even though the agricultural sector is a pride for India, its structure is not adequate to generate sufficient employment. It is necessary to optimize the usage of land (as land is a fixed resource) by use the labour forces. This is the reason significant amount of importance has been given to the activities like animal husbandry, fishery, social forestry, poultry and sericulture. Sericulture does not provide employments only to the cultivators but also generates employment at every stage, till getting the ultimate finished product of silk. Generally cultivation of mulberry leafs and rearing of silkworms provides employment for a whole family.

Sericulture plays an important role to secure the destiny of the rural population of West Bengal as more than 1.2lakhs families and approximately 2.5lakhs people are dependent on sericulture for their income. Being an agro based industry; it combines two most important sectors i.e. agricultural sector and industrial sector and at the same time creates a linkage bridge between the financially sound consumers and poor weaver artists (Hanumantharaya , 1996; Bukhari, *et al*., 2019).

This industry is especially important because it involves active participation of women in order to carry forward the activity of sericulture. The rearing of silkworm is an indoor activity and therefore easier for rural women of conservative families to take care of the activity (Savithri, *et al*., 2013). The flexible working hours which does not interfere with their household chores makes it suitable for the women to participate. The rearing of silkworms need motherly care where spinning and reeling need nimble fingers and so considered as a perfect sector for women to participate.

Study Area

Murshidabad is one of the most populous districts of West Bengal with approximate 7 lakhs population. The silk industry of West Bengal confines around the district Murshidabad and sometimes the silk of West Bengal goes by the name of Murshidabad Silk.

The silk industry of Murshidabad has had a long history dating back to the early eighteenth century at the time of Mughal Regime in India when Nawab Murshid Kuli Khan shifted his capital from Dhaka to the town of the East of Bhagirathi river and named it as Murshidabad and with that the silk weaving industry had established, also the East India Company had played a significant role for the same as they had a considerable trading interest of raw silk, chosen Murshidabad for trading purpose as that time Murshidabad was the capital of Bangla, Bihar and Orissa. Though with the flow of time the capital has shifted but the importance of Murshidabad as a silk trading centre is remain same.

The main objectives of this study to describe the overall condition of the silk industry of Murshidabad and also to explain the role of Government to maintain the significance of Murshidabad silk industry

Materials and Methods

The present study is based on the secondary sources of data. For this study both qualitative and quantitative data have been collected. Secondary data are collected from the District office under Directorate of Textile (Sericulture), Berhampore and also from Directorate of Textiles (Sericulture), Kolkata. Apart from the government office, data was collected from electronic source, various books and journals. The collected data was classified and analysed in tabular forms. Maps were prepared with the help of Arc GIS 10.5 version.

Government Schemes for the Upgradation of Silk Industry

Evolution of a disease resistant, hardy, robust silk worm breeds in consultation with Central Silk Board (CSB) with assistance from Japan International Cooperation Agency has given a right way to the growth of Sericulture.

The officers from Directorate of Textiles (Sericulture) and Central Silk Board are involving in the techno- feasibility study, have started taking preparations. State government are trying to link sericulture with major agro based programmes like RKVY, MGNREGP for better funding.

The quality of silkworm seed production is being improved in both Government and private sector are aiming for self-sufficiency in the requirement of mulberry silk. Proper support to upgrade the infrastructure of an ideal Rearing House, proper cultivation of mulberry trees and adequate rearing appliances and disinfectants are being provided. The Directorate of Textiles (Handlooms, Spinning Mills, Silk Weaving & Handloom Based Handicrafts Division) is a nodal body to look after the

development of the handloom sector of West Bengal. Department of Micro, Small and Medium Enterprises and Textiles (MSME & T) Government of West Bengal, arranged some welfare schemes for the artisans to encourage them such as, awards to Handicraft Artisans at State and District Level Handicraft Competition, Old Age Pension to Handicraft and Village Level Artisans and also providing Artisans Welfare fund which gives security and assistance to artisans and is managed by State Khadi and Village Industries Boards (KVIBs).

Calculations and Major Findings

Previously, Nistarirace of silkworm was the only weapon of sericulture of West Bengal but, with the different cross breeding techniques, new types of silkworm came out with an impressive output of silk's quantity and quality.

Previously 1 acre land was suitable for feeding of 2000DFLs (Disease free Layings) /year as the size of the Nistari silkworm was small and from 100 DFLs 38-40 KGs of cocoon produces but after adopting cross breeding techniques (crossbreed of Biovoltine and Nistari and also the breed comes from pure Biovoltine race) 1acre land is suitable for rearing of 1800DFLs/year as the size of the silkworm are large and as a result the size of the cocoon shells are large and so, from 100DFLs 40KGs of cocoon are being produced.

The following table is based on the calculation below-

1acre land is appropriate for rearing of 1800DFLs/year

100 DFLs produce 40 KGs of cocoon

Therefore, from 1800 DFLs $\frac{40\times1800}{100}$ KGs of cocoon produce

So, 720 KG of cocoon can be reared from 1acre land

3495.09 acres of land produces 2516464.8 KGs of cocoon i.e. 2516.46 MTs of cocoon

Renditta is the number of kilograms of fresh cocoons required to produce one kg silk.

9.5 KGs cocoon are required to produce 1 kg of silk

Therefore, 2516464.8 KGs of cocoon produce 264891.031 KGs of silk i.e. 264.89 MTs of silk

Approximately, 2500 KG of Paddy can get from 1acre of land (Rainfed area) per year. But if made into rice it will be 1750 kg.

Therefore 3495.09 acres (Khargram) land produces 6116407.5 KG of rice

1kg of boiled rice is 25rupees

So, the price of 6116407.5 KG of rice is 1529.10lakh (3.5 times less than the price of silk)

If we take the highest quality rice which cost 50 rupees 1Kg

Then, the price of 6116407.5 KG of rice is 3058.20lakh (1.7 times less than the price of silk)

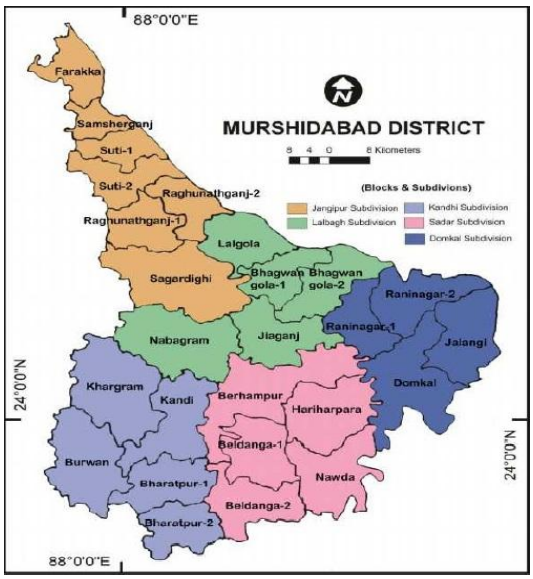
The production of silk is highest in Khargram (264.89MT).

The value of Raw silk is also highest in Khargram (5297.8lakhs).

The total raw silk production of West Bengal in the year 2018-19 was 2393.79MT.

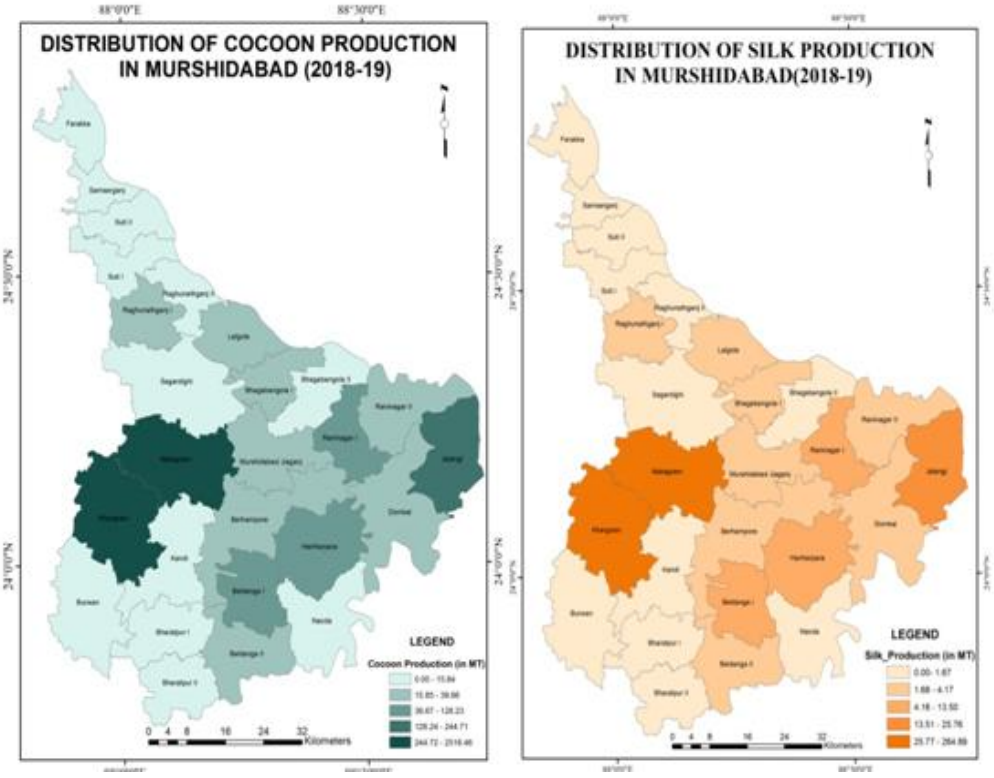
The Revenue earned from sericulture has shown a decreasing curve i.e. from 1950000 (in thousands) to 2150000 (in thousands) as the young generations are losing interest from this sector and its ultimate result is the decreasing curve of Additional employment generation.

Fig.1



Source- Mapsofindia.com

Fig.2



Source- District office under Directorate of Textile (Sericulture) Berhampore, Murshidabad
1KG (1KG= 0.001MT) of cocoon cost 175 Rupees
2516.46 MTs of cocoon cost 4403.81 Lakhs
1KG (1KG=0.001MT) of silk value 2000 Rupees
So, therefore 264.89 MTs of silk cost 5297.8 Lakhs

Table.1 Raw Silk Production in West Bengal (2018-19)

Type	Raw Silk Production (MT)
Mulberry Silk	2365.2
Vanya (Non-mulberry Silk)	
Tasar	24.51
Eri	3.93
Muga	0.15483
Total	2393.79

Source- Directorate of Textile (Sericulture), Kolkata

Table.2 Block Wise Production of Cocoon and Raw Silk

Sl. No.	Name of the Block	Block wise Area under Sericulture (acre)	Block wise Cocoon production (in MT)	Block wise silk production (in MT)
1	Khargram	3495.09	2516.46	264.89
2	Nabgram	2297.22	1653.0	174.11
3	Msd-Jiajang	33.12	23.85	2.51
4	Hariharpara	100.32	72.23	7.6
5	Jalangi	339.88	244.71	25.76
6	Raninagar-I	94.75	68.22	7.18
7	Raninagar-II	37.00	26.64	2.80
8	Berhampore	49.50	35.64	3.75
9	Domkol	55.08	39.66	4.17
10	Nawda	2.50	1.8	0.19
11	Beldanga I	178.10	128.23	13.5
12	Beldanga II	51.50	37.08	3.9
13	Raghunathgang I	30.00	21.6	2.27
14	Raghunathgang II	19.50	14.04	1.48
15	Lalgola	48.81	35.14	3.7
16	Bhagabangola-I	25.97	18.69	1.97
17	Bhagabangola –II	15.25	10.98	1.16
18	Sagardighi	22.00	15.84	1.67
19	Kandi	4.66	3.36	0.35
20	Barwan	16.75	12.06	1.27

Table.3 Block Wise Sale Value of Cocoon and Raw Silk

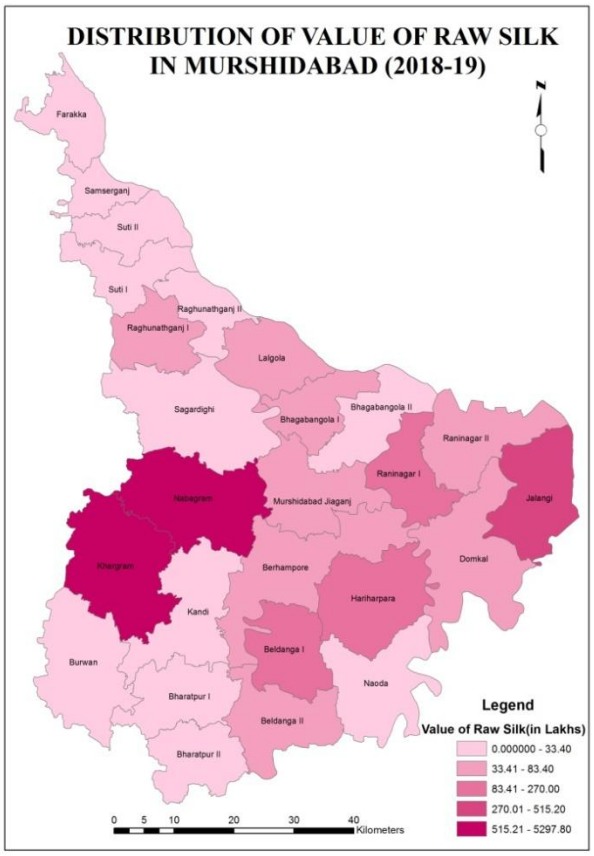
Sl. No.	Name of the Block	Block Wise sale Value of Cocoon (in Lakhs)	Block wise sale value of Raw Silk (in Lakhs)
1	Khargram	4403.81	5297.8
2	Nabgram	2892.75	3482.2
3	Msd-Jiajang	41.74	50.2
4	Hariharpara	126.40	152
5	Jalangi	428.24	515.2
6	Raninagar-I	119.39	143.6
7	Raninagar-II	4662	56
8	Berhampore	62.37	75
9	Domkol	69.41	83.4
10	Nawda	3.15	3.8
11	Beldanga I	224.40	270
12	Beldanga II	64.89	78
13	Raghunathgang I	37.8	45.4
14	Raghunathgang II	24.57	29.6
15	Lalgola	61.5	74
16	Bhagabangola-I	32.71	39.4
17	Bhagabangola –II	19.22	23.2
18	Sagardighi	27.72	33.4
19	Kandi	5.88	7
20	Barwan	21.11	25.4

Table.4 Annual Report of the Key Components of Sericulture (Only for Mulberry)

Particulars	2015-16	2016-17	2017-18	2018-19
Revenue Earned from Sericulture(in Thousands)	3388090	2985000	1950000	2150000
Additional Employment Generation (in No)	2414	2184	2029	1888

Source- District office under Directorate of Sericulture Berhampore, Murshidabad

Fig.3



Source- District office under Directorate of Textile (Sericulture) Berhampore, Murshidabad

From the previous calculation it can be summarized that from 1 acre land one can earn 43750 rupees to 87500 rupees per year for cultivation of rice (depending on the rice quality). Whereas, from that same area of land that person can earn 151600 rupees – 227400 rupees (depending on the budget and availability) per year form production of silk by using it for sericulture. If that person does not have proper equipment for the reeling of silk yarn only by cocoon production (Roy, 2015, 2019).

Sericulture is a farm based activity suited for both large and small land holdings with low capital investment and gives high return within a short period of time and thus considered as a cash crop. It has got important in the rural sector for generating maximum numbers of employment just next to agriculture. Farmer with small land holds can rear silk worm. If they reared in ¾th of their land, it would support three members in the family without hiring workers from outside (Reddy, 2019). This sector brings employment irrespective of communities, caste, creed, gender and religion (Kasi, 2013).

Women play a significant role in the silk sector. In many cases it is found that they are carrying both family burden and economic burden and in this situation it is very difficult for them to engage in the outside work.

Sericulture is a suitable activity for them as maximum of the work has been done in the indoors. Silk is an inseparable part of Indian culture and tradition and as a result India has got largest domestic market of silk.

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