



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Major Causes of Declining Sericulture Activities and Raw Silk Production in Malda district of West Bengal (India): An Analysis

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ABSTRACT:

Sericulture is an agro-based labour intensive and rural cottage industry. Sericulture is the only cash crop in agriculture sector that give quick returns income to the farmers within 30 days. Silk being an exclusive fiber and popular as "Queen of Textiles" and is well known for its natural colour, fine, strong and purity. Sericulture is also known as "Industry of the poor." The main objective of this research paper is to assess the growth and development of sericulture in Malda district of West Bengal, to find out the major reason of declining of sericulture activity and silk production in Malda district and suggest some remedial measures for the development of the sericulture activity. The entire study is based on Secondary sources of data, obtained from Central Silk Board, Mysore, Karnataka. In terms of Sericulture production, Malda district ranks first position in West Bengal followed by Murhisdabad, Nadia, Birbhum, Darjeeling etc. Malda district is very famous for raw silk production and raw silk weaving and can be termed as 'Silk Hub' (Silk-Centre) of West Bengal. The results of the study shows that In the year 2011-12 the district has produced 938.56 Metric tonnes of raw silk and 2021-22 the district has produced 853.87 Metric tonnes of raw silk. In the decades of 1990s and 2001 the district was very much famous for sericulture production but in recent decades 2011-12 there is declining of sericulture activity and raw silk production due various natural, socio-economic and political factors. At the same time the state faces various problems like price fluctuation of cocoon, absence of storage facility, absence of proper market, lack of financial support etc. The study also reveals that this activity provides ample employment and income in the rural areas and also thereby helps in alleviating poverty in Malda district of West Bengal.

Key Words (Index Term): Mulberry, Cocoons, Industry, Marketing, Training and guidance, Extension facility, Kaalbaisakhi

Introduction:

The word 'Sericulture' has been executed from the **Chinese word 'Su' [Si]**, which means **Silk**. In Sericulture, **Seri means 'silk'** and **culture means rearing**. Sericulture is an art and rearing of silkworm for the production of raw silk and other byproducts. In other words, sericulture activity generally refers to the mass-scale rearing of serigenous insects in order to obtain raw silk. Silk being a distinct fiber and exoteric as '**Queen of Textile**.' Sericulture is an agro-based, labour intensive and rural cottage industry providing ample employment to the economically weaker sections of the society.

The sericulture practices in India are old as its ancient culture. The History of Sericulture in India is dates back to Buddhist period. The word used in India 'Silk and cocoon' is in ancient Sanskrit literature indicates that India had a kind of silkworm in very ancient time. During phase of ancient India, there was a group of traders called Pundarik of Poundabordhan were practices the sericulture activity. From the philosophical evidence with reference to silk thread in Mahabharata, the Ramayana and the 'laws of Manu.' In Sanskrit literature silk cocoon is known as Pundarik. It can be said that the silk industry existed in India since before the Christian era. According to one view all domesticated forms of mulberry came from China. A Chinese Princess got married to a king of Tibet in 140 B.C. she brought some eggs of silkworms and some mulberry seeds hidden her headdress. From Tibet sericulture came to India.

Sericulture is a women friendly occupation as well as eco-friendly industry. It exhibits harmony between mankind and nature and show that how natural resources have been used by villagers without disturbing the ecology. So, sericulture is an ideal occupation in rural peoples of West Bengal. Therefore, sericulture is also known as 'Industry of the poor.' China is the mother of silk cultivation and is considered as the land of 'Sericulture.' The history of silk development spans through centuries and can be traced around the world's very ancient route called "**Silk Road**" which began in China, passed through Tashkent, Baghdad, Damascus, Istanbul and reached to European country. China is the first and largest producing country whereas India stands second largest producer of raw silk in the world. The major silk producing countries in the world are- China, India, Uzbekistan, Brazil, Japan, Republic of Korea, Thailand, Vietnam, Iran etc. The major silk consumers of the world are- USA, Italy, Japan, India, France, China, United Kingdom, Switzerland, Germany, UAE, Republic of Korea and Vietnam.

Review of Literature:

The review highlights the distinction areas covered by the many researchers and academicians which may be helpful to understand the issues relating to the present study and it also helps to find out the research gap. The basic sources of literature review of my study areas are- published research papers, articles in the journal of national and international repute, books, Government reports, Research agencies reports etc.

Taufique and Areful (2018) examined that sericulture is an agro-based labour intensive, household employment generation industry in West Bengal. The major sericulture rearing belts in West Bengal are Malda, Murshidabad, Birbhum, Cooch Behar, Jalpaiguri, Nadia, Darjelling and East Mednipur. The study also reveals that there are various problems such as fluctuation of cocoons prices, absence of storage facilities, absence of proper market etc. The researchers also observed that there is very good prospect of sericulture in west Bengal. **Monir and Mandal (2016)** examine that the Kaliachak-I block is the most intensive silk producing in the district of Malda. Almost 60 per cent of the raw silk has been confined in this block. Being a traditional area of sericulture this block plays a vital role in the district economy on sericulture. The researcher also provoked that the biggest cocoon market of the state is located in this block. **Hasinur and Nizamuddin (2013)** have observed that sericulture industry is unique for many reasons. In this paper the author has been pointed out that the present status of the sericulture industry in India, the country sericulture advanced countries in Asia their pace of trends in mulberry area and raw silk production, position in global silk scenario and marketing behaviour have been reviewed and analyzed. Today more than 29 countries in the world are engaged in silk production activities. **Taufique and Areful (2021)** observed sericulture is an very important economic activity relation with agriculture. In our country major sericulture rearing and traditional states are- Karnataka, Tamilnadu, Andhra Pradesh, West Bengal, Assam Jammu and Kashmir states. Their study reveals that this activity faces various problems such as price fluctuation of cocoons, absence of storage and warehouse facilities, absence of rural cocoon market, lack of financial support from the Central as well state governments etc. **Taufique, Areful and Yasir (2020)** insisted that Malda district of West Bengal is the largest producers of raw silk among the West Bengal state. Thus Malda district is known as "Hub of Raw Silk" in West Bengal. Their study reveals that natural factors like climate, temperature, soil, relief, drainage and socio-economic factors like good quality of raw materials, cheap and skilled labour, power supply, transport and communication network, research and extension facility play a very important role in the growth and development of sericulture in Malda district of West Bengal.

Sericulture in India:

India is the only country in the world which outturn all the five varieties of raw silk namely, Mulberry, Tropical Tasar, Oak Tasar, Eri and Muga. **Mulberry** is the chief practiced sericulture industry in India Mulberry silk production contributes about 75 per cent of entire silk production of the country. The major mulberry silk producing states are- Karnataka, Andhra Pradesh, West Bengal, Tamil Nadu and Jammu and Kashmir accounting for 96 per cent of country's total mulberry raw silk production (Sericulture in India: Cultivation and Economics, Kurukshetra Journal, Vol.65 No.3 January 2017).

The non-traditional states like Uttar Pradesh and Madhya Pradesh are also producing considerable quantities of mulberry silk. **Tropical Tasar** silk is mainly produced in states of Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh, Maharashtra, West Bengal, Uttar Pradesh and Andhra Pradesh. **Oak Tasar** is produced in the sub-Himalayan belt of India covering the states of Manipur, Nagaland and Uttarakhand. **Eri** culture is practiced mainly in the states North-Eastern states and Assam is the largest producer among the state. **Muga culture** is specific to the state of Assam and is an integral part of the tradition and culture of that state. However, Muga culture is getting popularized in other states like Arunachal Pradesh, West Bengal, Meghalaya and Nagaland.

Table 1.1 : Distinction of Silk, Silkworm names and Feeding plants in India

Distinction of Silk	Silkworm name	Common name of food plant rearing
Mulberry	Bombyxmori	Mulberry
Tropical Tasar	AntheraeaperniAntheraeamYlitta	Sal,Asan, Arjun
Oak Tasar	Antheraeaproylei	Oak
Eri	Phillosomiaticini	Castor, Tapioca, Kesseru
Muga	Antheraeaassama	Som,Soalu

Source: Sericulture in India: Cultivation and Economics, Kurukshetra Journal, Vol.65, No.3, January 2017

Statement of the Problem:

Sericulture had been a traditional livelihood activity of rural families of Malda district of West Bengal state. Sericulture play a vital role in the economy of district, providing employment specially women employment in rural areas. In the year 2011-12 the district has produced **938.56** Metric tonnes of raw silk and 2021-22 the district has produced 853. 87 Metric tonnes of raw silk. In the decades of 1990s and 2001 the district was very much famous for sericulture production but in recent decades 2011-12 there is declining of sericulture activity and raw silk production due various natural, socio-economic and political factors. There are various problems related with Sericulturist worker in different district of West Bengalsuch as- price fluctuation of cocoon, absence of proper market to sell the raw cocoon, poor linkage to the market, absence of storage facilities, poor information of market price, exploitation sericulture worker by the middle- men, lack of financial support, lack of innovation etc. These combined problems provoked the Researchers to take up this particular study. So, the present study will examine the gross level problems of sericulture workers and make some valuable suggestions to the short

out the problems. The outcomes or findings from this study will be very helpful for Administrators, Policymakers, Economists, Sociologists, Researchers, Academicians, Journalists, NGO workers, Ministry of Textile (Sericulture), Ministry of Rural Development, Ministry of Women and Child Development, Ministry of Labour and Employment, Government of West Bengal as well as the Central Government of India for their policy making.

Objectives of the Study:

The primary objectives of the study are-

1. To assess the growth and development of sericulture in Malda district of West Bengal.
2. To find out the major causes of declining of sericulture and raw silk production in the study area
3. To investigate the areas of strengths and future prospects of sericulture and give valuable suggestion to better promotion, growth, development and revive the glory of past contribution in sericulture in Malda district.

A Geographical Outlook of the Study Area:

Malda district of West Bengal has been selected as research study area. Malda district is entirely located in North Bengal, it is also known as Gateway of India. It is also called City of Mango. It lies in North Bengal on lower Indo-Gangetic plain. The latitudinal range of Malda lies between $24^{\circ}40'20''$ North and $25^{\circ}32'08''$ North, and the longitudinal range is $87^{\circ}45'50''$ East and $88^{\circ}28'10''$ East. For administrative purpose the district has been divided into 15 Community Development Block and two sub-division namely Malda Sadar and Chanchal Sadar. The district is very much famous for Mango Production, Litchi production, Jute Production and Sericulture activity (Raw Silk production) and notorious for fake currency making, illegal weapons making. Majority of the male population of this district are migrants labour, agricultural labour and Hawkers due none availability of any large scale, medium scale industries, majority of female population in rural are engaged in bidi making household industries. According to 2011 Census of India still 86.14 per cent population are belong to rural area.

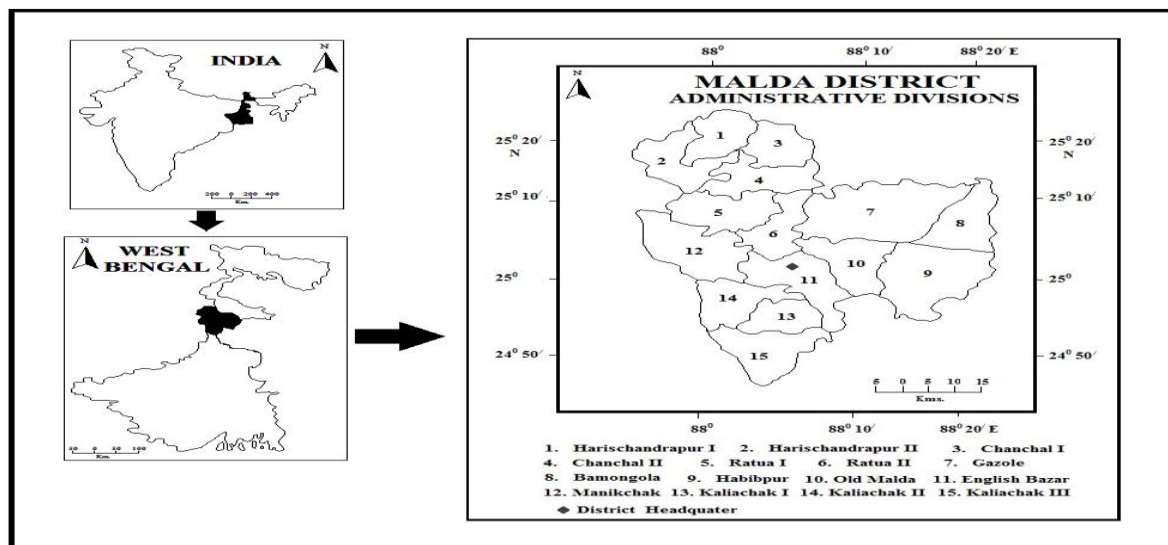


Figure 1: Location map of the Study Area

Database and Methodology:

The current research work is analytical, descriptive and empirical type of research work. The present study is based on secondary sources of data. The data has been collected from Central Silk Board, Mysore, Karnataka, Department of Textile (Sericulture), Malda district, Office of the Directorate of West Bengal Sericulture Institute Berhampore, Murshidabad Ministry of Textile (Sericulture), Government of West Bengal Kolkata, Published Research Articles, Research Journals, leading Newspapers and different books on sericulture, Google Scholar, Researchgate etc. The results have been represented through diagrams and tables with the help of MS Excel 2010 and consequently maps of study area are prepared with the help of Arc GIS 10.2 software.

Sericulture Activity in Malda district of West Bengal:

Malda district of West Bengal is treated as traditional state in sericulture activity. Sericulture has been a practice of the village folk of West Bengal since time immemorial. It is an additional crop to the agriculture of West Bengal. Mostly sericulture is practiced by small land holder for their livelihood. Nature has endowed West Bengal with favorable climatic and environmental conditions, which makes the state as a natural homeland of various raw silk productions. Malda district is also famous for raw silk production and raw silk weaving and can be termed as '**Silk Hub**' (**Silk-Centre**) of West Bengal. The availability of raw materials and chief marketing facilities are the most important factor to establish the sericulture industry in Malda district of West Bengal.

In terms of silk production, West Bengal ranks third in India, and Malda district secured first position in West Bengal. The Murshidabad district ranked second after Malda. Malda is basically sericulture rearing district. Here, silk are produced for business purposes. One the other hand, Murshidabad is noted for the production of seeds. Here animal rearing is a supplementary activity of farmer. So the silk is facing competition with paddy or Jute. Silk is not staple crop. But this region is dominated in terms of silk cloth weaving and it ranks top in West Bengal.

From the beginning, Malda district was noted for sericulture which is clear to us from the Arthashastra or Kautiliya. This industry got its peak performance here due to the hard labour and courage of Mughal rulers and Bengal kings of ancient Gour. Consequently it was being attracted by the foreign traders. Some places of Malda district had got an excellent position in sericulture and a number of foreigners had come to Malda especially Englishbazar, Sujapur and Kaliachak areas. Among them Englishbazar was dominant. In 1681, the British East India Company invested of allocated 2, 30,000 pound and in the Bengal out of this 1,40,000 pound was invested for promote of sericulture in Englishbazar (Malda) and Qasimbazar in Murshidabad. The Britishers are setup the colony at Englishbazar and Qasimbazar. After the establishment of colony in Malda, the export of silk and silk cloth increased and it started to reach among the common people of England as it was cheap and of high quality. During this time a large silk industry existed which carried rearing, reeling and weaving operations.

The good climatic condition, availability of reeling facilities and storage facilities are important factor for the location of sericulture activity in Malda district of West Bengal since long time. In the year 2011, there are about 59,044 rearers family in this district spreading over 760 villages under the different sericultural potentials blocks and raising four commercial crop annually i.e., Jaistha, Bhaduri, Agrihayani, and chaitra and consuming near about 5 crore disease free laying (dfils).

The major sericulture rearing villages among the different block in Malda district are- Alinagar, Nabinagar, Uttar Dariapur, Jalalpur, Sujapur, Modhughat, Kadamtola, Baishnabnagar, Sahabajpur, Mozampur, Amrity, Piasbari, Mohodipur, Milky, Sodullahpur, Chandipur, Mathurapur, Lalbathani, Bacchamari, Mangalbari, Sahapur, Muchia etc. These villages are actively engaged in sericulture activities since time immemorial.

The Deputy Directorate of Textile (Sericulture), Malda acts as a facilitator through execution of a large number of schemes and projects under the state plan and centrally sponsored schemes for ensuring steady growth of sericulture in the district. The Directorate has been successfully linking various sericulture activities for the last few decades with the major agro-based programmes of the union government like RKVY, MGNREGA etc. As, for instance some major activities have already been taken up by the Directorate like land development, road construction within the farm excavation/re excavation for existing ponds for the purpose of irrigation in the mulberry garden, filling of low lands areas to make it suitable for mulberry cultivation etc. In the process of implementing these activities the local Panchyat play a major role.

In Malda district of West Bengal there are 5 commercial sericulture crops season are taken by the sericulture farmers. These are-

- (i) *Baishakhi* Season (March- April Month)
- (ii) *Jaistha/ Shrivani Bhaduri* Season (June-July Month)
- (iii) *Ashwina* Season (August-September Month)
- (iv) *Agrahayani* Season (November- December Month)
- (v) *Phalguni* Season (February- March Month)

Table 1. 2: Silkworm races and Season in Malda District, West Bengal

Sl. No.	Silkworm rearing season	Races	Duration of Days
1.	<i>Baisakhi</i>	Nx F1	22
2.	<i>Jaistha/Shrabani Bhaduri</i>	NxN/NxM12W	25
3.	<i>Agrahayani</i>	NxN/NxM12W	25-28
4.	<i>Aswina</i>	NxF1	28-30
5.	<i>Phalguni</i>	NxF1	28

Source: Deputy Director of Textile (Sericulture), Malda District Report, 2011, West Bengal

Results and Discussion

Table 1.3: Statistics of Sericulture, Malda district, West Bengal 2021-22

Total Mulberry Areas (in Acres)	2387.86
Raw Silk Production (In Metric Tonnes)	853.87
No. of Sericulture farmers	30,544
Sericulture Services Technical Centre (Total No.)	12
Mulberry Farm of Nursery (Total No.)	7
Sericulture Grainage Farm (Total No.)	2
Silk Co-operative Societies (Total No.)	12
Government Silk Reeling Institute (Total No.)	2
Cocoon Market	1
Silk Park Institute	1

Source: Computed from District Sericulture Office Report, Deputy Director of Textile (Sericulture) Malda district, West Bengal

Table 1.4: Production of Raw Silk in Malda District of West Bengal 2011-12 to 2021-22

Name of Block	Mulberry Area in Acres (2011-12)	Raw Silk Production in Metric Tonnes (2011-12)	Mulberry Area in Acres (2021-22)	Raw Silk Production in Metric Tonnes (2021-22)
Harishchandrapur-I	2.18	2.19	3.77	5.55
Chanchal-I	3.76	3.67	5.05	6.77
Chanchal-II	422.66	42.38	368.90	55.78
Harishchandrapur-II	9.00	30.19	67.98	76.23
Ratua-I	14.43	45.11	55.32	18.90
Ratua-II	12.87	26.00	22.41	16.45
Gazole	3.16	1.12	28.05	3.26
Old Malda	26.44	43.11	46.81	34.51
Habibpur	2.11	1.80	7.18	3.31
English Bazar	1295.12	215.48	976.23	188.45
Bamongola	1.75	2.19	17.13	3.01
Manikchak	17.28	21.56	33.95	41.45
Kaliachak-I	1810.23	256.18	886.11	159.78
Kaliachak-II	845.03	191.21	509.12	134.52
Kaliachak-III	138.65	56.37	326.32	105.90
Total	4604.67	938.56	2387.86	853.87

Source: Computed from District Sericulture Office Report, Deputy Director of Textile (Sericulture) Malda district, West Bengal 2021-22

Major Causes of Declining of Sericulture and Raw Silk Production in Malda district:

❖ Competition of sericulture with different cash crops:

Sericulture in Malda district of West Bengal has been faced strict competition with others cash crops and horticulture such as vegetables, jute cultivation, sugarcane, litchi, mango cultivation, banana, guava, makhna etc. Sericulturists are not getting their remunerative price for their hard work. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ Absence of Proper Sericulture and Cocoon Market:

In Malda district of West Bengal there is only one Sericulture Cocoon Market is available that is Kaliachak cocoon market at Kaliachak-I Block. So among the others sericulture potential block farmers are forced to sell their cocoon only in this particular market. Thus the transport fares decrease the profit among the sericulturist. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ Low price of Cocoon:

In every year of different sericulture rearing season the price of cocoon is fluctuation according to the demand and quality of cocoon. Thus, Sericulturists are not getting their remunerative price for their hard work. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ Involvement of Middlemen and traders:

Due to absence of market, the middlemen and traders are moving door to door for buying the cocoon at low prices. Thus, Sericulturists are not getting their remunerative price for their hard work. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ **Low Quality of DFLs Supply:**

Sericulture Department at various regions of this district is providing sometimes low quality of Disease Free Layings Eggs (Dfls) for sericulture rearing and thus there is low quality of cocoon production. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ **Lack of Silkworm Rearing House and Modern Equipments facilities:**

Sericulture activities are performs by lower middle class farmers. So, they cannot invest huge amount of money to construct silkworm rearing house and modern equipments. Thus in the study area there is lack of big-farmers for commercial rearing of sericulture. There is very few numbers of farmers who get beneficiary by Central Government to construct modern silkworm rearing and modern equipments facilities in the study area.

❖ **Lack of Extension Activity and Facilities:**

Sericulture activities are performed by illiterate people in the study area. There is no much more extension activity carried by NGOs, sericulture department, agriculture department in the study area.

❖ **Flood Situation and Kalbaisakhi Cyclone:**

Malda district is located at lower Indo- Gangetic Plains areas. Taal regions (Harishchandrapur-I, Harishchandrapur-II, Chanchal-I, Chanchal-II, Ratua-I, Ratua-II, Manikchak) and Barind regions (Bamongola, Habibpur, Gazole and Old Malda) every year there is flood situation conditions occurs and most of mulberry gardens are submerged under flood water thus there is heavy destruction of mulberry gardens. Moreover, Kalbaisakhi (Cyclone) are also play a put hurdles in the production of sericulture. So, most of the sericulture farmers are not interested to take sericulture profession in the study area.

❖ **Inactive participation Sericulture Department Officers and Technical Staffs:**

There is lack of Scientist A-B-C Groups and technical staffs in the department of Sericulture, Malda district, Ministry of Textile (Sericulture). Sericulture promotion and development works is going on paper not in really or ground level. This may be due to willingly or inactive participation by Sericulture department.

❖ **Monopoly by Central Government against State Government:**

Central Government (NDA) is not interested to release budget to the state government (TMC Lead Government) regarding promotion and development of Sericulture due to political insatiability.

❖ **Modern Society Conceived Sericulture as Lower Profession:**

In our modern society some section of peoples or upper rich peoples are showing neglected attitude those who are engaged in sericulture rearing profession in semi-rural areas.

❖ **Absence of Warehouse and Storage facilities:**

Department of Textile (Sericulture), Malda district, has been not setup any government warehouse and storages facilities to store surplus cocoon and raw silk materials in the study area.

❖ **Competition of Indian Silk products with Artificial Chinese and Japanese Rayon:**

Recent time silk products of India are facing tough competition with Chinese and Japanese silk products in prices and quality because foreign silk products are selling at cheap rate and their quality and fabrics are attractive. Thus there is no much more demand of Indian silk at International market.

❖ **Lack of financial and credit institution and problem:**

As sericulture activity are performs by lower economically section peoples. They cannot not set up this activity as a commercial purpose due to lack of capital or financial problems. Most of the banks and cooperative sector are not interested to give loan facilities to the poor farmers.

❖ **Sericulture Activity or Raw Silk trading and Business perform by Muslim Communities:**

Since ancient times sericulture activities or raw silks trading works are perform by Muslim communities in West Bengal. Thus it is monopoly or agenda by Central Government (NDA Government) to destroy this activity for targeting the Muslim communities for unemployment and planning to economically backwardness or weaker sections.

❖ **Converting Mulberry gardens into Mango or litchi gardens:**

Due to so arduous and very hardworking profession of sericulture activity and ultimately no much more profit by this profession most of sericulture in rural areas of Malda district are converting their mulberry gardens into Mango and litchi gardens and switch over to another profession or become migrants workers in search of their livelihoods. .

Suggestion and Policy Implication

- There is an urgent need to establish sericulture cocoon market at among different blocks especially Harishchandrapur-II, Chanchal-I , Gozole block of Malda district.
- The Central Silk Board, Mysore, Karnataka and Department of Textile (Sericulture) should take necessary steps to educate the farmers by conducting meeting, training programme, publish materials in vernacular languages and extends messages to traditional sericulture practices in state of West Bengal.
- The Department of Textile (Sericulture) Malda district, West Bengal should supply mulberry sapling and silkworms eggs to the sericulture workers to the different block of rural areas of at subsidized rate and encourage promotes them to cultivate sericulture.
- Other important pre-requisite for the growth and promotion of sericulture in the district is financial or credit facility. The Central Silk Board, Mysore and Government of West Bengal and various cooperative societies should provide long-terms as well short terms loans for mulberry plantation, construction of rearing rooms and for rearing equipment's to the sericulture farmers.
- For the growth and development of sericulture in Malda district of West Bengal, effective training, workshops of silkworms rearing and mulberry plantation should be given to the rearers of different block in the study area which in turn may increase the quality of silk cocoons and mulberry plantation.
- Effective extension services provided to Sericulturist at all stages. There should be Public Private Participation for the development of sericulture in Malda districts of West Bengal.

Conclusion:

There is a very good prospect for the development of sericulture activities in Malda district of West Bengal. This activity provides ample employment and income in the rural areas and also thereby helps in alleviating poverty in Malda district of West Bengal. The farmers of sericulture in West Bengal are very happy with this activity by earning good returns. The Government of West Bengal should appoint a brand ambassador of sericulture as mass promotion of sericulture in rural areas of the state of West Bengal. Finally co-operation from various sections like officers, Technical Staff, Sericulture Scientist, Researchers, artisans, traders, rearers etc. engaged in activities related to sericulture is necessary for the successful growth and development of this activity in rural areas of Malda district.

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