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Sericulture Industry in Assam: A Source of Employment Generation

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Abstract

generating Sericulture is a traditional Agro-based industry. It involves cultivation of host plants and rearing of silkworms for the production of cocoon to produce raw silk. Therefore, sericulture has vast potential for income and employment opportunities primarily to the rural masses of Indian states thereby contributing in poverty alleviation and earning foreign exchange. A lot of entrepreneurial opportunities are available in various field of sericulture. India is the second largest producer of silk and also the largest consumer of silk in the world having a strong tradition bound domestic market. It has the distinction of producing all the four varieties of silk viz. Mulberry, Eri, Tasar and Muga. It is necessary to upgrade the silk of the sericulturists to use the full potentialities of sericulture to produce quantitatively superior cocoons and to earn profitable income. This agro-based industry has also been playing an important role in the generation of employment and income in a slowly growing economy of the North-Eastern state of Assam. Although all the four varieties of silk are produced in Assam, Eri and Muga occupies the primary position in the sericulture scenario of the state. Rural employment generation has become the major focus of the inclusive development in all the developing economies in the post-globalization era. However, the growth of sericulture industry was not always stable over the years. Low productivity, price fluctuations, lack of proper markets, poor finance, lack of transportation and storage facilities, lack of technology and traditional type of industry are some of the key obstacles which holds back the industry to grow to its full potential. Therefore, the present paper tries to understand the scope of employment and income generation, pattern of silk yarn production and analyze the problems and prospects of sericulture industry in Assam.

Keywords: Sericulture, Employment Generation, Income Generation, Traditional Industry, Assam

INTRODUCTION:

India, with 14.7% share in global raw silk production, is the second largest producer of silk in the world next to China. Silk is known as the "Golden Fibre" of the "Queen of Textile". In India, sericulture is not only a tradition but also a living culture (Bharati, 2016). It is a farm-based labor-intensive and commercially attractive economic activity falling under the cottage and small-scale sector. It provides income and employment to the rural poor especially farmers with small land holdings and the marginalized and weaker sections of the society. Sericulture industry starts with agricultural activity of mulberry cultivation, silkworm rearing cocoon production, silk reeling, spinning, dyeing, weaving printing etc. Asia is considered the leading producer of silk producing over 95% of the world's production. Most of them are produced in China, India, Japan, Brazil and South Korea. With an annual production of around 28,000 tons of raw silk, India ranks as the second largest producer of raw silk in the world accounting for about 18% of the world's total raw silk production (Gogoi, 2023). Silk is the most elegant textile in the world

with unique grandeur, natural sheen, inherent affinity for dyes, high absorbance, light weight, soft touch and high durability known as the "Queen of Textiles" all over the world. It stands for livelihood opportunities for millions owing to development of an agrarian economy like India. India has a rich and complex history in silk production and its silk trade dates back to 15th century. Sericulture industry provides employment to around 8 million people in rural and semi-urban areas in India (Bukhari and Kaur, 2019). Employment generation is one of the major potentials of the Sericulture and Silk Industry all over the world. The farm and non-farm activity of this sector creates sixty lakh employments every year mostly in rural India. The significant part of this employment generation includes its capability of transferring wealth from high end urban customers to poor artisan classes (Roy et al., ?). Assam, in the North-East region of India bordering seven states-Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim and two countries' viz, Bhutan and Bangladesh, has a rich history deeply intertwined with the state's cultural and economic fabrics. Known for its abundant natural resources and conducive climate the state has emerged as a significant hub for silk production. Growth and development of silk industry in the state was significant from very early period as the state was known as a country of "cocoon rearer" in the time of Ramayana. In Arthasastra, Kautilya extolled the richness and beauty of Assam's silk as "as red as the sun, as soft as the surface of the gem". The state is also known as the "land of Golden Silk" (Mahana, 2012). Traditionally, sericulture industry has been a major cottage industry of the state. The industry primarily focuses on the cultivation of silkworms and the production of cocoons and high-quality silk contributing to both local livelihoods and the state's economic growth. Sericulture is practiced in Assam from time immemorial and continues to be an important farm based labor-intensive activity providing gainful employment to more than 3 lakh families in rural and semi-urban areas of the state. Sizeable number of male workers belonging to the economically weaker section of the society and women favor the sericulture because of its relatively low requirement of fixed capital and higher returns on investment. The state has proudly been producing both Mulberry and Non-Mulberry especially Muga and Eri and Oak Tasar in the two hill districts. The Muga, also known as the Golden Silk yarn is unique to the state. Assam has the monopoly in the production of Muga, the "Golden Silk" in the whole world as more than 95 percent of global Muga Silk is produced in Assam. The state is also a major producer of Eri Silk accounting for 62 percent of the country's total Eri Silk production (Economic Survey of Assam, 2023-24). Assam currently ranks first for non-mulberry or Vanya silk production accounting for a significant portion of the nation's total silk production (Hussain et al.).

Significance of the Study

Sericulture is a traditional cottage industry rooted in the life and culture of Assam. Sericulture in Assam comprises production of Mulberry (Pat) and Non-Mulberry (Muga, Endi and Oak Tasar) silk. In the present day it is emerging as one of the major sectors through which profitable entrepreneurship can be practiced worldwide. Among the North-Eastern states, Assam is endowed with a rich variety of silk cultivation. However, production and productivity has not been satisfactory in the recent past. This paper tries to understand the pattern of silk yarn production and scope of employment and income generation in sericulture industry of Assam.

Objectives of the Study

The major objectives of the present study are:

- To understand the pattern of silk yarn production in Assam

- To evaluate the scope of employment and income generation in Sericulture industry of Assam
- To analyze the problems and prospects of sericulture industry in Assam

Methodology

The present study is based completely on secondary data. During the study, an exhaustive review of published articles and books was conducted. Various reports published by Government of Assam and Government of India such as Reports from Economic Survey of Assam, Statistical Handbook of Assam, Central Silk Board, Ministry of Textiles, govt. of India served as the sources of secondary data.

Review of Literature

Anitha (2011) in her study concludes that Indian silk industry has already become a major player on the global scenario. However, encouragement of additional technological and economic research in various aspects of sericulture, standardization and quality control of silk and silk products, provision of quality seeds, imparting knowledge among the farmers regarding farm disease and rationalization of marketing and stabilization of prices of silk cocoons and raw silk could be some measures taken for rapidly expanding silk industry of the country. Though, the sector has been identified as a sector with strong potential to create jobs and able to contribute to foreign trade, its production and productivity has not been satisfactory in comparison to China.

Mahan (2012) in her study revealed that silk of Tai-Ahom people of Assam has been attracting the tourists from the early period. She concluded that the sericulture in industry can be developed as an attraction of both domestic as well as foreign tourists. Govt. of India has initiated several development measures through Central Silk Board to give impetus to the growth and development of silk industries. Central Silk Board has set up a Regional Muga Research Station in Mirza (Assam) to promote muga industry in the North-Eastern region. It has also set up a Muga Raw Material Bank at Sibsagarh with sub-depot at Dhakuakhana in the year 1981 to give necessary price support to the commercial muga cocoon producers. Besides, in Sualkuchi, the Khadi Production Center (KPC) of the Assam Khadi and Village Industries Board, the Export Oriented Handloom Project of the Assam Government Marketing Corporation (AGMC), the Assam Apex Weavers and Artisans Corporative Federation (ARTFED), Centre and Sales Emporium of AGMC are working.

Bharathi (2016) in her study revealed that sericulture can generate employment opportunities as officers, managers in the agricultural loan sector of nationalized as well as private banks, they can even provide job as a manager in sericulture farm, grainage, silk reeling, silk weaving mill, dyeing, printing and spinning mill as well as in various central government sponsored schemes.

Kherkatary and Daimari (2017) in their study reveals that growth rates in both raw silk production and employment generation has not been smooth and continuous rather these are fluctuating over the years in Assam. It has also been found negative in some years.

Gogoi (2023) in her study reveals that due to low investment requirement, low gestation period and providing higher return, sericulture is an ideal occupation for weaker section of the society which makes the industry highly suitable for small and marginal farmers. She also concluded that the sericulture industry acts as a tool for economic reconstruction of the economy providing vibrancy to the rural economy and entrepreneurial activities in sericulture will boost the performance of the country at large.

Hazarika and Saikia (2023) in their paper exploring the intricate landscape of sericulture in the Lakhimpur district of Assam highlights cultural and economic importance of sericulture. They observed that

sericulture has an important socioeconomic impact on local communities of the region providing employment opportunities, generating income and contributing on the overall development of the communities.

Results and Discussion

Production of Silk Yarn:

The production of silk yarn namely, Eri, Muga and Mulberry in metric tonnes over the years from the year 2009-10 to 2022-23 through a time series analysis is shown in the following figures:

Figure 1 (A), (B) and (C): Time series analysis showcasing the production of silk yarn (in MT)

Figure 1:Production of Eri Silk (2009-10-2022-23)

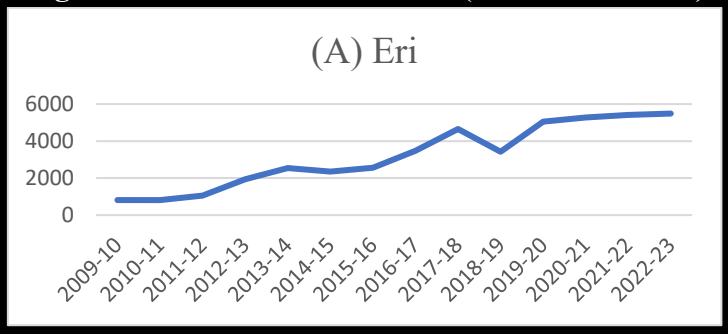


Figure 2: Production of Muga Silk (2009-10-2022-23)

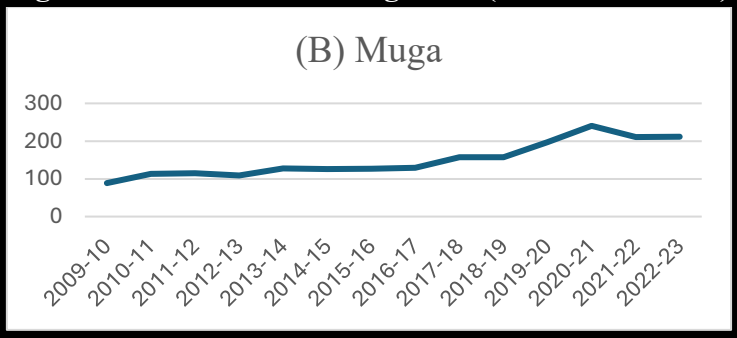
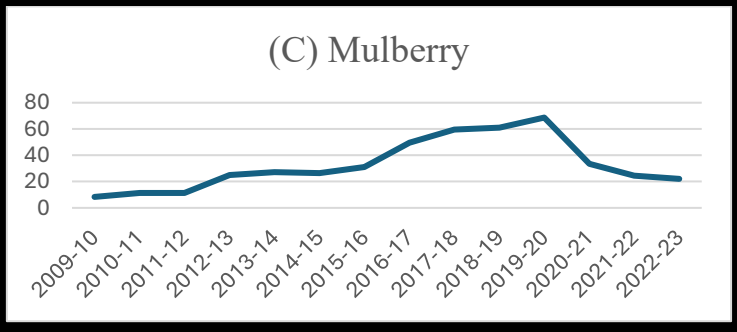


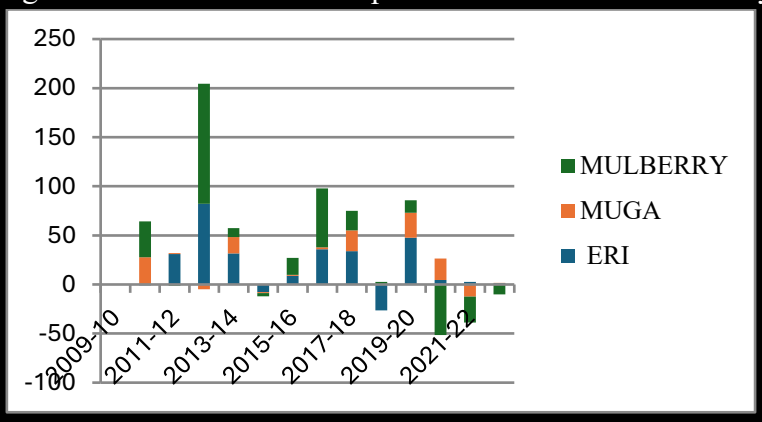
Figure 3: Production of Mulberry Silk (2009-10-2022-23)



Source: Assam Economic Survey

The growth rate in the production of silk yarn is shown in the following figure:

Figure 5: Growth rate of silk production in Assam over the years



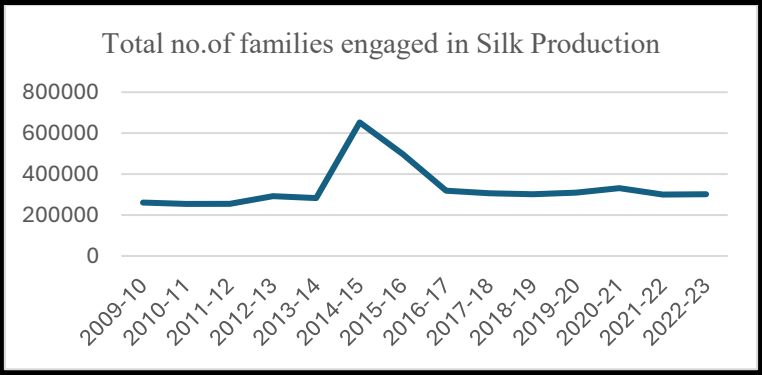
Source: Authors' calculation based on the data collected from Director of Sericulture, Govt. of Assam

The percentage growth rate of Eri was highest in the year 2012-13 (82.18%). The percentage growth rate of Muga was highest in the year 2010-11 (27.67%). In case of Mulberry, the percentage growth rate was highest in the year 2012-13 (122.22%).

Trend of Employment Status in Sericulture in Assam:

The following Figure 6 demonstrate the trend line of the number of families engaged in sericulture since 2009-10 to 2022-23. It can be observed from the above figure that the share of sericulture in the workforce, particularly ericulture, decreased substantially. The reason is the seasonality of the sector. Besides, many young generations with better educational qualifications hesitate to pursue sericulture as a source of income and instead go to metropolitan and semi-urban areas in pursuit of work in the public or private sectors (Gogoi, 2023). Due to drop in per capita land ownership and the conversion of areas to other lucrative agriculture such as tea gardens, the number of people practicing muga culture has decreased.

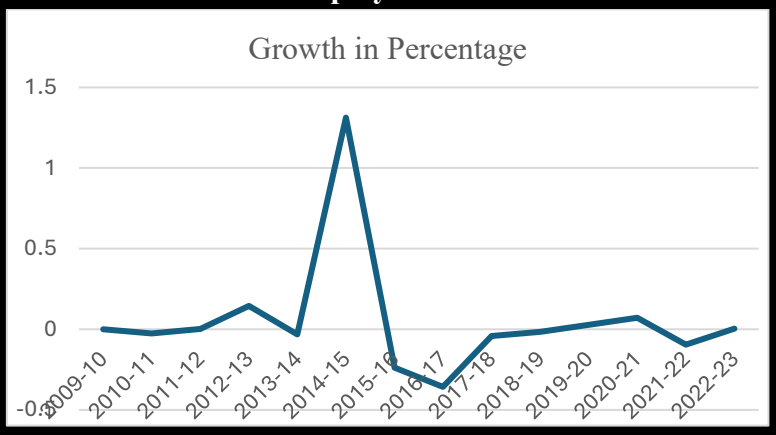
Figure 6: Total No. of families engaged in silk production (2009-10-2022-23)



Source: Authors' calculation based on the data collected from Director of Sericulture, Govt. of Assam

Moreover, the trend of employment in sericulture is not smooth and continuous over the period of time. This fluctuation in trend of employment in sericulture is demonstrated in figure 7. It is revealed that the growth rate of employment in sericulture is negative in the periods 2010-11, 2013-14, 2015-16, 2016-17, 2017-18, 2018-19 and 2021-22 as well.

Figure 7: Growth rate of Employment over the time in Sericulture



Source: Authors' calculation based on the data collected from Director of Sericulture, Govt. of Assam

Variations in average no. of Families Engaged in Sericulture:

Table 1 provides the variation in number of families engaged in different components such as Eri, Muga and Mulberry production in Assam. It is observed that the average total number of families engaged in raw silk production activity is in time periods is more than three lakhs in which the number of families engaged in Eri constitute 2.64 lakh, while it is only 32 thousand and 35 thousand in both Mulberry and Muga production respectively. The families involved in the practice of Ericulture were highest in the year 2014-15 (188%). In case of Muga, it was highest in the year 2012-13 (50.61%). However, the percentage of families involved in the production of mulberry was highest in the year 2014-15 (109.88%).

Table 1:Disparity in Average no of Families engaged in various Silk Production

Variable	Average Employment
Eri	264534.5
Muga	35964.07
Mulberry	32450.36
Total	332948.9

Source: Directorate of Sericulture, Govt. of Assam

Problems and Prospects of Sericulture Industry in Assam:

There are some problems faced by sericulture industry in India as well as in the state of Assam. Some of the problems encountered by sericulture industry during cocoon production, processing and marketing activities are discussed in the following points:

- Shortage of feeds, inadequate supply of quality and healthy seeds for commercial rearing and use of poor-quality seeds and less productive silkworm breeds, lack of information/education and disease infestation are the main problems faced during cocoon production.
- Unavailability of equipment like improved reeling and spinning machine due to low income of the families is considered one of the major problems in processing activities. Moreover, equipment used in the silk industry are simple, conventional and labour intensive which leads to low value addition, heavy dependence on manual skill.
- High price fluctuation, middlemen interference and poor supply chain management and increase import of silk from China, absence of organized sericulture market, lack of storage facilities and

inadequate market information are some of the problems encountered during sericulture marketing.

- Changing consumer tastes in domestic market from traditional heavy handloom fabrics to lighter materials and imports of low-priced textiles from other countries are signal to the industry to reorient its production plans to match the changing demand patterns of both national and international market demand.
- Inadequate availability of quality raw silk and high prices of cocoon, as a consequence of which the demand for good quality raw silk in bulk quantity at a competitive price is not being met.

Prospects of Sericulture Industry in Assam

Sericulture is an occupation of low investments with high income and it is highly advantageous in comparison to other agricultural crops. Sericulture involves traditional and simple technologies which can be adopted by all farmers irrespective of literacy and it does not require sophisticated equipment. In Assam, Sericulture is mostly practiced by indigenous tribal people. In developing country like India, sericulture industry plays a key role in the upliftment of tribal society. It is the only cottage industry in the country which provides abundant work for the in the rural and semi-urban areas. In the context of industrial development sericulture has an important role to play in providing employment and generating income among the rural population. As a section of the farmers in Assam, during agricultural off-season engage themselves in cocoon rearing, therefore, the need of the present day is to make cocoon rearing a regular profession of the section of the cultivators, particularly small and landless cultivators as a principal source of income. The sericulture industry is highly scattered and unorganized sector. Government initiative through Central Silk Board and Integrated Scheme for Development of Silk Industry have not reached to all the rural economies equally. Introduction of High Yielding Variety of Silk will boost the productivity. Moreover, adoption of advanced and new technology can save both time and the cost of production. Provision of timely dose of insecticides and pesticides will help increase the life span of cocoons by hindering the attack of various pests and insects.

Conclusion

Sericulture is a village-based industry providing employment opportunities to a large section of the population of the country. The natural silk industry of Assam is an indispensable part of the people of Assam, their culture and tradition. Assam's silk industry has the potential to significantly boost the state's economy and create substantial employment opportunities preserving its rich cultural heritage and traditional craftsmanship (Phukan, 2024). The present global scenario indicates the enormous opportunities for the Indian Silk industry. It offers a wide range of employment opportunities. Sericulture offers gainful employment not only to the rural masses but also for the educated youth in semi-urban and urban areas. Sericulture in recent times has begun to offer wide variety of employment and entrepreneurship options. Every state in the country now has a sericulture department to focus on rearing of silk worms, production of fibre and marketing (Bharathi, 2016). Significant variation has also been observed in raw silk production over the years among the three different components, Eri, Muga and Mulberry. Despite having many problems in the sericulture industry of the state, favorable climatic conditions and participation of large number of people in sericulture industry will lead to the development of silk industry to a greater height. Assam requires collaborative efforts from all stakeholders along with the adoption of innovative, eco-friendly practices to ensure its long-term development and success.

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