



## POPULAR SCIENCE ARTICLE

## Economic Prospects of Sericulture in Assam: A Critical Analysis

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### Abstract

Sericulture has historically occupied a unique position in the agrarian and cultural landscape of Assam. The state is globally renowned for its indigenous silks and traditional weaving systems which are deeply embedded in rural livelihoods. In recent decades sericulture has been increasingly viewed not merely as a cultural heritage activity but as a viable agro based industry with significant economic potential. This article critically analyses the economic prospects of sericulture in Assam by examining its production systems employment generation capacity market opportunities and institutional support mechanisms. Emphasis is given to mulberry, muga, eri and tasar silk sectors which collectively differentiate Assam from other sericultural regions of India.

**Key words:** Sericulture, Silk, Livelihood, Employment, Sustainability, Economy

### Introduction

Assam occupies a distinctive place in the sericultural map of India due to the coexistence of multiple silk varieties and a long tradition of silk weaving. Sericulture in Assam is not merely an agricultural activity but a socio-economic system that integrates farming forestry artisanal skills and cultural practices. Unlike many other states where sericulture is primarily mulberry based Assam produces mulberry, muga, eri and tasar silk thereby offering diversified economic opportunities. The unique golden hue of muga silk, the thermal properties of eri silk and the ecofriendly image of tasar silk provide Assam with comparative advantages in national and international markets.

From an economic perspective sericulture is particularly relevant for Assam because of its labour-intensive nature and suitability for small and marginal farmers. The state is characterized by fragmented landholdings periodic floods and limited industrialization which restrict large scale employment opportunities. In this context sericulture offers a decentralized livelihood option that can absorb family labour generate year-round income and support cottage-based enterprises. According to national estimates sericulture provides direct and indirect employment to millions of people in India with a significant proportion being women and rural youth.

Despite its potential the sericulture sector in Assam has not achieved commensurate economic growth. Productivity levels remain

lower than national averages and the value chain is marked by inefficiencies. Traditional practices limited access to improved technologies weak extension services and inadequate market linkages have constrained the sector's contribution to the state economy. Therefore, a critical analysis of the economic potential of sericulture in Assam is essential to understand both its opportunities and limitations. This article seeks to examine the structure performance and prospects of sericulture in Assam with a focus on income generation employment creation and sustainable development.

### Overview of Sericulture in Assam

Sericulture in Assam is unique due to the presence of four commercially exploited silk varieties. Mulberry silk is produced mainly in the western and central districts while muga silk is endemic to Assam and neighbouring regions. Eri silk is widely practiced across the state and is closely linked to household weaving traditions. Tasar silk though relatively limited has potential in forest fringe areas.

The production system in Assam is predominantly small scale and household based. Farmers often integrate sericulture with agriculture horticulture and livestock rearing. This integrated nature reduces risk and enhances livelihood resilience. Muga and eri silkworms are often reared outdoors on perennial host plants which lowers input costs but also exposes production to climatic variability. Mulberry sericulture involves more

intensive management but offers higher yields under controlled conditions. From an economic standpoint the diversity of silk types allows Assam to cater to different market segments. Mulberry silk serves the mass textile market while muga and eri cater to niche segments that value authenticity and sustainability. This differentiation enhances the overall economic potential of the sector.

### **Employment Generation and Livelihood Impact**

One of the most significant economic contributions of sericulture in Assam is employment generation. Sericulture is labour intensive at all stages including host plant cultivation silkworm rearing cocoon processing spinning weaving and marketing. Each hectare of sericulture can generate substantially higher employment compared to many conventional crops.

In Assam sericulture provides supplementary and primary income to thousands of rural households. Women play a central role particularly in eri silkworm rearing spinning and weaving (Goswami and Bhattacharya, 2013). This gender inclusive nature of sericulture enhances household welfare and contributes to social empowerment. Studies have shown that income from sericulture is often used for education health and household assets thereby improving overall quality of life.

Sericulture is also suitable for landless and marginal farmers since many activities can be carried out on homestead land or common property resources. Eri silkworm rearing for instance can be practiced using castor plants grown on bunds and fallow land. This inclusiveness strengthens the economic relevance of sericulture in a state like Assam where land constraints are significant.

### **Income and Value Addition Potential**

The economic potential of sericulture is closely linked to value addition along the silk value chain. In Assam a substantial portion of silk production is consumed locally or sold in raw form which limits income realization. However, weaving and garment making significantly enhance value and generate additional employment.

Traditional Assamese handloom products such as mekhela chador and shawls made from muga and eri silk command premium prices. With proper branding and quality assurance these products have strong potential in urban and export markets. The growing global demand for natural and sustainable textiles further enhances prospects for Assam silk.

Value addition also includes by products such as silkworm pupae which are used as animal feed and human food in some communities. Mulberry leaves and castor plants contribute to agro ecological services. When these ancillary benefits are considered the overall economic returns from sericulture are substantially higher than often perceived.

### **Market Structure and Trade Opportunities**

The market for silk in Assam is characterized by a mix of traditional local markets and emerging modern channels. Local markets are dominated by intermediaries which often results in lower prices for producers. Limited access to market information and bargaining power further constrain farmers' incomes.

At the national level Indian silk faces competition from imported silk particularly from China. However, Assam's indigenous silks enjoy geographical uniqueness which provides a competitive edge. Muga silk in particular has potential for geographical indication-based branding which can enhance market value.

Internationally there is increasing demand for ethically produced and environmentally friendly textiles. Eri silk also known as peace silk aligns well with these trends as it allows silk extraction without killing the silkworm. Strategic marketing and compliance with quality standards can enable Assam to tap into these niche markets and increase foreign exchange earnings.

### **Institutional Support and Policy Framework**

The development of sericulture in Assam is supported by various government institutions and schemes. These include research and extension services input subsidies training programs and infrastructure development initiatives. Central and state government agencies have implemented programs aimed at improving productivity and expanding sericulture coverage.

Despite these efforts institutional support has often been fragmented and unevenly distributed. Extension services face capacity constraints and adoption of improved technologies remain limited. Research outputs are not always effectively transferred to the field. Strengthening institutional coordination and farmer centric approaches is crucial for realizing the economic potential of sericulture.

Public private partnerships can play a key role in enhancing market access and investment. Cooperative models producer companies and self-help groups can improve economies of scale and bargaining power. Such institutional innovations are essential for integrating small producers into competitive value chains.

### Constraints and Challenges

While the economic potential of sericulture in Assam is significant several challenges persist. Productivity levels are affected by pests, diseases and climatic variability. Floods and erratic rainfall frequently damage host plants and disrupt silkworm rearing cycles. Climate change is likely to exacerbate these risks.

Infrastructure gaps such as lack of reeling units, storage facilities and testing laboratories limit quality improvement. Access to credit remains a major constraint particularly for small and marginal producers. Traditional practices though culturally valuable often result in inconsistent quality which affects market competitiveness.

Another challenge is the declining interest of youth in sericulture due to perceptions of low returns and labour intensity. Addressing this requires modernization skill development and demonstration of profitable models. Without addressing these constraints, the economic contribution of sericulture will remain below its potential.

### Future Prospects and Strategic Interventions

The future of sericulture in Assam depends on strategic interventions that enhance productivity sustainability and market integration. Technological innovations such as improved silkworm breeds disease management practices and climate resilient host plants can significantly improve yields. Digital tools for extension and market information can empower farmers and reduce transaction costs.

Value chain development should focus on strengthening processing and marketing infrastructure. Branding of Assam silk and promotion through e commerce platforms can expand market reach. Linking sericulture with tourism and cultural industries can create additional revenue streams.

Sustainability considerations are increasingly important. Sericulture aligns well with sustainable development goals due to its low carbon footprint and employment generation capacity. Promoting organic and ecofriendly sericulture practices can enhance both economic and environmental outcomes.

### Conclusion

Sericulture holds considerable economic potential for Assam due to its unique silk varieties labour intensive nature and cultural significance. It contributes to rural livelihoods employment generation and income diversification particularly for women and marginal farmers. The diversity of silk types offers opportunities for market differentiation and value addition. However, realizing this potential requires addressing persistent challenges related to productivity infrastructure market access and institutional support.

A critical analysis reveals that sericulture in Assam can emerge as a key driver of inclusive and sustainable development if supported by coherent policies technological innovation and effective market integration. Strengthening value chains promoting branding and enhancing institutional capacity are essential steps in this direction. With appropriate interventions sericulture can not only preserve Assam's rich cultural heritage but also contribute significantly to its economic transformation.

### References

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