



CURRENT SCENARIO IN SERICULTURE

Ms. Bindiya Verma, M.Sc Sericulture, Department of Sericulture, Poonch Campus,
University of Jammu

Ms. Sparshika Sharma, Research Scholar in Department of Sericulture, University of
Mysore, Ward No 1 Near HDFC Bank Billawar. Tehsil Billawar District Kathua, Jammu
And Kashmir

Ms. Megha Shan, M. Sc in Sericulture, University of Jammu, Kunja Trigam Kishtwar,
Jammu and Kashmir

Ms. Nanita Bora, M. Sc(Agri) In Sericulture, College of Sericulture, Assam Agricultural
University, Jorhat

ABSTRACT :- Sericulture is an agro-based labour intensive and rural cottage industry. Sericulture is also known as “Queen of Textile”. In our country India, major sericulture rearing states are Karnataka, Tamilnadu, Andhra Pradesh, West Bengal, Assam and Jammu and Kashmir states. 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. There is a very good prospect of sericulture activities in our country India. If the present trend followed in future the state will become 65 per cent bi-voltine silkworms rearing in mulberry rearing. India is the world's second-largest silk producer. Though Indian silk industry occupies a predominant position in the world, its production is only 15% of total world production and more than 80% of production is contributed by China. In this article, the present status of the sericulture industry in India, its trends, position in global sericulture have been reviewed. This article would be helpful in recognizing the potential, strength and challenges of the sericulture industry in India so as to formulate certain policies and measures for socio-economic development.

Key words:- Cocoons, Indian silk, sericulture, Industry, Production, Guidance



Introduction:-

The Silk industry has a distinctive position in India, and plays a significant role in Textile Industry and Export. India is the 2nd largest producer of silk in the world with 19690 MT (2008-09) and also the largest consumer of silk in the world and contributes 15% of the total world raw silk production. Sericulture has become an important rural industry in India. India is the second major silk producing country in the world after China. Though major production here is being consumed internally nevertheless the silk industry promises a lot of export potential. India is the only silk producing country which produces all the commercially known varieties of silk, viz., Mulberry, Tasar, Eri and Muga. However, over 90% of silk produced is mulberry silk only. Moreover mulberry silk production is relatively better organized and is steadily increasing. The production of mulberry silk is largely confined to Karnataka, Andhra Pradesh, west Bengal and Jammu and Kashmir. Karnataka accounts for about 65% of the total production of mulberry silk while Jammu and Kashmir produces 0.66% only.

Sericulture assumes a special significance in the state of Jammu and Kashmir. This is the only traditional Univoltine belt in India capable of producing silk comparable to the qualities of exquisite imported raw silk of standard quality in the international markets. Its climate temperate and congenial

for rearing both Univoltine and Bivoltine silk worms" races. In view of the limited scope for pollution oriented heavy industries, sericulture has assumed added significance in the industrial planning of the state. Moreover the operation of this industry does not entail any import of raw material from outside the state at exorbitant transport costs. India, the sericulture industry stands tall as one of the driving makers of silk, grasping different climatic conditions to develop different silk assortments, counting Mulberry,

Tasar, Eri, and Muga (Chand et. al., 2023). However, the sericulture industry, both globally and in India, faces many challenges. The gradual decline of skilled silkworm farmers poses a serious threat to the industry's continuity as the younger



eneration is attracted to modern livelihoods (Majumdar et. al.,^[31] 2017) .^g

Environmental concerns, along with climate change and natural disasters, are affecting silk production and cocoon quality, creating an urgent need for innovative practices and sustainable practices. Advances in biotechnology and genetic research offer hope for the development of disease-resistant silkworms and for improving

verall silk yield (Nagaraju, 2002)^[32] o

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' or 'Poundabordhan' ere 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. The earliest evidences of the production of mulberry silk come from the Mughal period, during which the industry had a prosperous time. According to medieval historians, sericulture was widely practiced in Kashmir, West Bengal, Karnataka and other parts of India. It has a long history, when the silk industry has faced period of great prosperity and decline. Subsequently, the East India Company patronized silk production in India to supply the raw silk to the silk weaving units from the India to Great Britain. The silkworm rearing also practices in South India during the Tipu Sultan regime.

Sericulture, is divided in two sectors namely farm and industry. The farm sector involves growing silkworm's food plants, rearing silkworm to produce cocoons and eggs. Reeling, twisting, dyeing, printing, finishing, knitting form the industry sector (Srivastav et al., 2005). Sericulture, the production of silk worms and thus ultimately of silk fibre (Ganga & Chetty, 1991), has become a promising rural activity in India because of its minimum gestation period, minimal investment, maximum employment potential and quick turnover for investment (Kasi, 2000, 2009a & 2009d). Out of 6.39 lakh villages in India, sericulture is practised in about 69,000 villages (Central Silk Board, 2002; Geetha &



Indira, 2011; Lakshmanan et al., 2011). Sericulture activity brings regular income to the community without any bias of caste, creed, gender, or religion. A remarkable feature of this activity is its egalitarianism— sericulture farmers, rich and poor, earn the same income from it. As women has a crucial role in the activities of sericulture, it equally creates opportunities and make them independent socially, economically, politically, and otherwise (Goyal, 2007; Pillai & Shanta, 2011; Thomas et al., 2010). Sericulture is an extremely labor intensive industry and occupies a pivotal position from the point of providing employment and additonal income to weaker sections (Best & Maier, 2007). India enjoys the availability and practice of mulberry and non-mulberry sericulture like tasar, eri, muga and oak-tasar varieties (Savithri, Sujathamma& Neeraja 2013). The tasar silk industry has acquired a big role in improving tribal socioeconomic condition besides generating substantial rural employment (Suryanarayana & Srivastava, 2005; Rao, 2007). There are 258 well- recognized tribal communities, notified as scheduled tribes in India (Sinha, 2003). There are more than 58 countries practicing sericulture in the world.

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

Distinction of Silk	Silkworm Name	Common name of food plant rearing	Major Regions of rearing
Mulberry	Bombyx mori	Mulberry	All states of India
Tropical Tasar	Antheraea myllita, Antheraea perni	Sal,Asan,Arjun	Bihar,M.P,Odisha,Maharashtra, West Bengal,A.P
Oak Tasar	Antheraea proylei	Oak	Sub Himalayan states[Manipur, Himachal Pradesh, Uttar Pradesh, Assam, Meghalaya and Jammu and Kashmir]



Eri	Phillosomia ricini	Castor,Tapioca, Kesseru	Assam, Bihar, West Bengal, Odisha, Manipur
Muga	Antheraea assama	Som,Soalu	Assam [Brahmaputra river valley]

S,NO	YEAR	RAW SILK PRODUCTION [in Metric Tonnes]
1.	2015 - 2016	28,523MT
2.	2016 - 2017	30,348MT
3.	2017 - 2018	31,906MT
4.	2018 - 2019	35,468MT
5.	2019 - 2020	35,820MT
6.	2020 - 2021	33,770MT
7.	2021 -2022	34,903MT

8.	2022 - 2023	36,582MT
9.	2023 - 2024	38,913MT
10.	2024 - 2025	34,042MT

Objectives of the Study:



1. To examine the growth and development of sericulture in India.
2. To analysis the production of raw silk and highlighted .
3. To highlight the problems related with farmers in sericulture activities.
4. To focus the future prospect of sericulture of India.

Problems:-

.Mulberry sericulture is limited to certain states and certain regions in Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal and Jammu and Kashmir.

. In mulberry sericulture, univoltine / bivoltine silkworm races are reared only in Jammu and Kashmir but these are reared only one / two times in a year and are susceptible to diseases.

.Bulk of the silk produced in India is from the cross between multivoltine and bivoltine, which is low in quality by international silk standards.

□ The cost of production of silk cocoons in India is much higher, which is not affordable by rural people. Hence, they hesitate to take up sericulture as their occupation.

.As the China is number one producer of silk in the world, it dumps its silk in India, by which the price of the Indian silk fetches less. As Chinese silk is very cheaper compared to India.

. The production of mulberry silk needs well mechanized techniques which are not well developed in India, there exist a wide gap is cocoon yields. Hence, India is lagging behind China both in quality and quantity of silk production.

. The price of the cocoons are less, hence the farmers are switching over from mulberry to other agricultural crops. There is a sharp decline in mulberry area due to uprooting of mulberry crop, especially in some of the major mulberry silk producing states like Karnataka, Andhra Pradesh and Tamil Nadu.

. Liberalization during 2005 due to implementation of World Trade Organization (WTO) agreement has discouraged the production of silk in India.



.Establishment of mulberry garden by way of direct planting of cuttings in the main field leads to poor development of saplings resulting in low production of mulberry leaves.

.Majority of the farmers are not adopting the recommended package of practices for cultivation of mulberry viz., varieties, manures, fertilizers, cultural operations, etc., hence leaf yield and quality are less, and hence they are disappointed.

. Majority of the farmers (over 85%) in India rear the young-age (chawki) silkworms in the dwelling houses and it is difficult to regulate / provide optimum environmental conditions, hence cocoon quality is very low, as these worms require highly nutritious leaves and proper care to reap good cocoon harvest.

. Lack of awareness in harvesting and transportation of cocoons lead to poor quality of cocoons.

. Problems of pests and diseases on mulberry and silkworm and their effective management through integrated approach are lacking.

Suggestion:-

To improve sericulture in India, key strategies involve adopting modern technologies, enhancing capacity building, promoting climate-resilient practices, strengthening market linkages, and securing policy support. These measures aim to increase productivity, improve silk quality, and ensure sustainable growth of the industry.

Here's a more detailed look at the suggestions:

1. Adoption of Modern Technology:

Biotechnology:

Utilizing genetically improved silkworm breeds and exploring gene editing can enhance disease resistance and yield.

Precision Farming:

Implementing techniques like IoT sensors and data analytics can optimize rearing conditions and resource management.

Automation:

Introducing automated silk reeling machines and climate-controlled rearing houses can improve efficiency and reduce labor costs.

2. Capacity Building:



Training Programs:

Conducting regular training sessions for farmers on best practices in silkworm rearing, pest management, and disease control.

Knowledge Transfer:

Facilitating collaboration between research institutions, universities, and farmers to disseminate new knowledge and technologies.

3. Climate-Resilient Practices:

Mulberry Cultivation:

Developing and promoting climate-resilient mulberry varieties suitable for different agro-climatic regions.

Water Management:

Implementing water-efficient irrigation systems and promoting water conservation techniques.

Integrated Pest Management:

Adopting integrated pest management strategies to minimize reliance on chemical pesticides.

4. Market Linkages:

Organized Marketing:

Establishing organized marketing channels and e-commerce platforms to connect farmers directly with buyers.

Export Promotion:

Supporting export promotion councils and initiatives to expand the market reach for Indian silk products.

Value Addition:

Encouraging the development of value-added silk products to increase profitability for farmers.

5. Policy Support:

Financial Assistance:



Providing subsidies for irrigation, inputs, and equipment to reduce the financial burden on farmers.

Infrastructure Development:

Investing in infrastructure development, including specialized sericulture zones and logistics support.

Research Funding:

Allocating sufficient funds for research and development to drive innovation in sericulture.

Conclusion:-The present article has attempted to assemble all the relevant information regarding status of the sericulture industry. In India, Sericulture is mostly a town-based industry providing employment opportunities to a large

portion of the population. Despite being seen as a secondary occupation, industrial advancements have enabled its intensive scale and sufficient income generation. It can also provide steady pay to farmers. It is one of the noticeable undertakings, which gives fulltime business to whole family advertising tall pay and superior standard of living. But there is a wide crevice between production of silk in India, its utilization and export trend. This offers a great scope for the expansion of sericulture industry. The production of silk and use of silk products can be increased by creating awareness, providing guidance, stimulation and more financial assistance to silk producers.

Reference:

Aziz A., and Hanumappa H.G., 1985. 'Silk Industry: problems and prospects' Ashish publication Housing, New Delhi.

Angadi, B.S., 2017. 'Sericulture in India: Cultivation and Economics'. Kurukshetra, a Journal on Rural Development, Vol. 65 No.3, January, pp. 37-40.



Bajpai, D.N. and Sukla R. N., 1998. 'Growth of sericulture and its impact on silk textile industry in Uttar Pradesh'. Journal of Economics and sustainable Development Vol.2 No.5, pp. 39-40.

Baishya, P., 2005. 'The silk industry of Assam- A case Study of the Sualkuchi cluster, Spectram publication', Guwahati, Assam.

Charsley, S.R., 1982. 'Culture and sericulture: Social anthropology and development in a South Indian livestock's Industry', London: Academic press.

Babulal, R.K. Khatri, A. K. Sharma and V.P Sharma., 2010. 'Impact of extension on mulberry cocoon productivity in Uttarakhand'. The international Journal of Humanities and Social Studies, Vol 2, Issue 11.

Dewangan, S.K., 2011. 'Sericulture- A tool of eco-system checking through tribal'. Journal of environmental research and Development, Vol. 6 No. 1, July-Sept.

Dhar,A., Farooq, M. and Mir Nisar 2011. 'Recent trends in development of bivoltine sericulture in Jammu and Kashmir'. Technical compendium of workshop held at SKKC, Srinagar on October.29.

Enayat, A., Snehasish, S., and Sultana Parveen 2008. 'Present scenario of mulberry cultivation in Malda. Indian silk' 47(6), 4-7.

Fatima,K., 2013. 'Trends in cocoon and raw silk production in Jammu and Kashmir state- A case study concern'. Publish in International Journal of recent scientific research vol. 4. (II).

Gangopadhyay, D., 2008. 'Sericulture industry in India- A Review'. A document in Indian Science and technology studies, New Delhi.

Gani, N., Kamili, A., 2012. 'Indian sericulture industry with particularly reference to Jammu and Kashmir' International Journal of advanced biological research, Vol.2, Issue 2. pp. 34-41.

Hari Om Aggarwal & Seth, M.K., 2000. 'Sericulture in India'. Volume-I 'Dehradun, Uttarakhand.

Ishtiaque, A., 2011. 'Silk industries of Bangladesh: Problems and possibilities: Directory of business case studies publications', Vol. 4. Issue 6, pp. 1-10.

Jaljali., 2015. 'Sericulture in Assam: An overview', Research journal of Humanities and Social Science'. Vol.4.Issue, pp.40-53.



Kamili, Afifa S. and Masoodi, M. Amin., 2001 'Principles of temperate sericulture', Kalyani Publishers. New Delhi.

Lakshmi, C.S., 2010, 'Sustainable Growth of sericulture sector in Andhra Pradesh, American International Journal of Research in Humanities, Arts and Social Sciences, Vol. 16, issue 6, pp. 121-126.

Mishra, S., 2003. Rural Youth empowerment through sericulture-A case study of Prakasam district of Andhra Pradesh, The international Journal of Humanities and Social Studies, Vol. 4. Issue 9. pp. 65-73.

Qadri S. Farahat, Malik, M.A., 2010. 'Adoption of improved sericulture practices by sericulturists in boarder area of Kashmir'. International Journal of Agricultural Statistics and Science Vol. 13 (2), pp.45-49.

Ramana, D.V., 1981. 'Economics of Sericulture and silk industry in India' Deep and Deep publications, New Delhi.

Sukla, N., (2012), 'Economics of rained sericulture- A study in Udaipur district of Rajasthan India', Indian Journal of innovations Development Vol.3, Issue 8. pp. 67-75.

Thade, S.K., 2011. 'Status of sericulture in West Bengal'. Souvenir, National Seminar on mulberry sericulture Research in India. KSSR&DI, Bangalore.

Taufique, M., Hoque, A., 2018. Status and Performance of Sericulture in West Bengal: A Geographical Analysis, Asian Profile International Journal, Canada Vol. 46 No. 2, pp. 181-193.

Taufique, M., Hanafi, Y., Hoque, A., 2019. Determinants of Sericulture in Malda district of West Bengal, A Geographical Analysis, The Geographer, AMU Geographical Society, Vol. 66, No. 2, pp. 46-54, July Month.

Taufique, M., Hoque, A., 2020. Sericulture in Malda district of West Bengal: A Block level Analysis, KRONDOSHEE Journal, A Mouthpiece of Department of Geography, Cinnamara College, Jorhat, Assam, Vol. V, pp. 67-84.

Venkateswaru. 2001. 'Status of sericulture in Andhra Pradesh', Souvenir, National Seminar mulberry, Sericulture research in India, KSSSR & DI, Bangalore.

Yasin, S., 2013. 'Indian Sericulture Industry: It's Importance, Problems and Prospects' International Journal of Research in Management, Vol.2 No.2 pp. 1-15.