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HISTORICAL BACKGROUND OF SERICULTURE

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Abstract:

Sericulture, being one of the oldest agri-based rural industries, has a history dating back almost five millennia to China and then spread to other regions through the Silk Route. Sericulture in India, particularly in Karnataka, has become an integral part of rural life, as it is grown at the household level and decisively connected with agricultural life. Because of the prevalent favorable climate, skilled labor, and traditional knowledge base, Tumkur district in Karnataka has emerged as one of the key sericulture zones. The present study explores the historical evolution of sericulture.

Key words: Sericulture, Silkworm, Cultivation, mulberry, Fibre, Cocoon, Harvesting

Introduction:

“Sericulture’ is a combination of the Latin term ‘Sericum,’ meaning silk, and the English word ‘Culture,’ meaning nurturing silkworms. Due to its great employment potential, low investment requirements, and lucrative nature, “sericulture” is a means of subsistence for millions of people. Approximately 8.5 million people are employed throughout the whole silk production value chain, from soil to silk, in India, the world's second-largest producer of silk. Legend, myth, folklore, and religious epics such as the Ramayana, Mahabharata, and Veda have all made reference to silk” (Nanavaty, 1965).

According to records, the silkworm was found by the Aryans in the sub-Himalayan region and occasionally in the Western Himalayas outside of Kashmir (Mukherjee, 1919). Our nation has always utilized the magnificent natural fibre as a symbol of custom, ceremony, and culture. The fibber’s smooth feel, grace, and other exceptional qualities make it superior to other textile fibres. From kings' reign to the present, it has consistently been regarded as an aristocratic emblem. The natural fibre has been dubbed the “Queen of Textile” and is regarded as unique in the textile industry. The finding and provenance of this exquisite natural fibre remain unclear and questionable, nevertheless.

The discovery of this royal filament is thought to have happened by accident around 2500 B.C. when Queen His-Ling-Shih, the wife of Emperor Huang-Ti, was drinking tea in her garden when a cocoon fell into her cup. As she removed the cocoon, she grabbed a silken filament. While selling silk, spices, and rare gems along the well-known “Silk Route/Road,” the Chinese kept the discovery a secret for generations. The fibber’s splendour and elegance have inspired many to create synthetic silk that mimics real silk. Nonetheless, it has consistently dominated the textile industry as a natural fibre. Silk's superiority over artificial fibre could not be overcome by its short-term advantages due to its smoothness, fineness, and natural affinity for dyes.

China is the world's greatest producer of silk when it comes to silk production. In terms of silk output, India came in second. Mulberry silk accounts for over 80% of the nation's total silk production, with the three southern states of Karnataka, Andhra Pradesh, and Tamilnadu producing the most, followed by West Bengal and Jammu & Kashmir. Since silkworms increase the supply of textiles, they are primarily the second most profitable insect after honeybees, which benefits all people. In the past, China traded silk moths for the weight of gold. However, in the present, our nation produces four types of silk: Mulberry, Tassar, Eri, and Muga. This is because, over time, the demand for these silks has increased.

In ancient days, China sold silk moths for the weight of gold. However, in modern times, four types of silk are produced in our nation: Mulberry, Tassar, Eri, and Muga. This is because the need for silk clothing is growing over time. Due to increased demand, farmers are becoming more interested in sericulture and shifting to silk cultivation, which increases their profits.



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These days, if we want to earn more money in addition to growing crops, we can choose to start a business in sericulture. This will help our farmers earn more money and boost our nation's economy.

Objectives of the study:

- To examine the historical evolution of sericulture.
- To trace the spread of Silk from China to Karnataka.

Methodology:

The foundation of the study is entirely dependent on secondary data. The data required for the study has been collected from different sources, including books, journals, publications, and genuine websites. In order to fulfill the objectives of the study, the data has been closely examined and evaluated.

Review of Literature:

1. **Patil, R. B. (2008)**, Historical Perspectives of Sericulture in Karnataka. This study offers a comprehensive overview of the history of sericulture in Karnataka, tracing back to the state's pre-independence years. It highlights the economic significance of sericulture in the region and particularly examines Tumkur's evolution in silk production. The study details the adaptation of sericulture techniques that have transitioned from traditional to more commercial approaches, impacting both cultural and economic landscapes.
2. **Naidu, S. (2020)**, "The Global Silk Market and Its Implications for Indian Farmers." Naidu examines the pressures Tumkur's sericulture farmers face due to international competition, particularly from low-cost producers in China. The study highlights the difficulties local farmers experience in competing without stronger export incentives or market protections.
3. In their article 'Indian Silk Industry in the global scenario-A case Study', **R. Anitha** has written that "India is the only country in the world that produces all varieties of silk, i.e., tassar, muga, and mulberry. India holds a predominant position in the world map. It is the second largest producer of silk in the world next to China." Though the Indian silk industry holds a predominant position in the world map, its production accounts only for 15% of the total world production, while more than 80% of the production comes from China. The export in India has grown at an adequate rate during the study period with high and significant growth in terms of quantity as well as value. Along with this, there is also an increase in volatility. With the cooperation of Japanese technology, the Central Silk Board has recently succeeded in evolving & popularizing Bivoltine silkworm races, which can produce raw silk of international standards. This can definitely ensure reforms in the marketing of cocoons. With this, India can definitely look forward to the export of domestic raw silk outside its boundaries.

History of Sericulture in India:

"India has an ancient association with silk production. Silk is popularly called *Resham* in eastern and northern regions of the country, while in southern India it is known as *Pattu*. Archaeological findings from Harappa and Chanhu-daro indicate that sericulture, involving the use of wild silk from indigenous silkworm varieties, was practiced in the South Asian region during the period of the Indus Valley Civilization (c. 2450–2000 BCE). In contrast, firmly established archaeological evidence of silk production in China dates to approximately 2570 BCE. However, Shelagh Vainker, a silk specialist at the Ashmolean Museum, argues that silk production in China may have begun significantly earlier, possibly before 2500–2000 BCE. She further suggests that the people of the Indus Valley Civilization may have either collected wild silkworm cocoons themselves or engaged in trade with communities who did, demonstrating substantial knowledge of silk and its processing..(Abbott, Phill (17 February 2009). "Rethinking silk's origins: Nature News". Nature). (doi:10.1038/457945a).



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After China, India is the world's second-largest producer of silk. Five Indian states—Andhra Pradesh, Karnataka, Jammu and Kashmir, Tamil Nadu, and West Bengal—provide around 97% of the country's raw mulberry silk. The bulk of Karnataka's silk manufacturing comes from North Bangalore, the future location of a \$20 million "Silk City" that will include Ramanagara and Mysore.

The world's biggest consumer of silk is India. In Assam and southern India, it is customary to wear silk sarees at marriages and other auspicious rituals. Historically, the upper classes were the main users of silk, which is seen as an emblem of monarchy. In the south, Kanchipuram, Pochampally, Dharmavaram, Mysore, and Arani; in the north, Banaras; and in the east, Bhagalpur and Murshidabad, silk garments and sarees are widely known. Three distinct varieties of silk—Muga, Eri, and Pat silk—are produced in the northeastern state of Assam and are referred to as Assam silk. Silkworms that are indigenous to Assam create Muga, the golden silk, and Eri”.

Largest Producer of Silk

Asia is the world's biggest producer of silk. Asia accounts for more than 95% of total world production. Despite more than 40 countries being listed on the world map of silk production, China and India produce most of it. Japan, Brazil, and Korea stand second and third on this list. The world's number one producer of silk is China. India is the world's biggest consumer of silk and its number two producer. Silk has an excellent domestic market that is deeply rooted in tradition and culture. The states of Karnataka, Andhra Pradesh, Tamil Nadu, Jammu & Kashmir, and West Bengal are primary producers of mulberry silk. On the other hand, Jharkhand, Chattisgarh, Orissa, and northeastern states of India are primary producers of non-mulberry.

Global Scenario:

Among the world's leading producers of silk are China, India, Uzbekistan, Brazil, Thailand, Vietnam, Japan, the Republic of Korea and DPR Korea. Nonetheless, its manufacturing facilities are dispersed over 60 nations worldwide. With about 80% of the global silk trade, China is the world's biggest supplier and producer (120000 MT in 2018). Approximately 95% of the world's silk is produced in Asia, which is regarded as the epicentre of silk production (Yaseen et al., 2013). The global silk industry is geographically widespread, encompassing more than sixty countries; however, production remains highly concentrated in a few regions. China and India together account for the largest share of global silk manufacturing, making them the dominant producers in the international market. At the same time, silk consumption is significant in both developed and emerging economies. Major silk-importing and consuming countries include the United States, Italy, Japan, India, France, China, the United Kingdom, Switzerland, Germany, and the United Arab Emirates. This distribution reflects the globalized nature of the silk trade, where production and consumption are linked through international commercial networks. (Table 1).

Table 1: World raw silk production

Countries	2012	2013	2014	2015	2016	2017	2018	2019	Share%
China	126000	130000	146000	170000	158400	142000	120000	68600	63.00
India	23679	26480	28708	28523	30348	31906	35468	35820	32.80
Uzbekistan	940	980	1100	1200	1256	1200	1800	1800	01.65
Thailand	655	680	692	698	712	680	680	700	00.64
Brazil	614	660	560	600	660	600	650	469	00.43



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Vietnam	450	475	420	450	523	620	680	795	00.73
N. Korea	300	300	320	350	365	365	350	370	00.34
Iran	123	123	110	120	125	120	110	227	00.21
Bangladesh	43	43	45	44	44	41	41	41	00.10
Turkey	22	25	32	30	32	30	30	5	
Japan	30	30	30	30	32	20	20	16	
Madagascar	18	18	15	5	6	7	7	7.5	
Indonesia	20	16	10	8	4	2.5	2.5	2.5	
Bulgaria	9	9	8	8	9	10	10	10	
Others	8*	9*	8*	7*	6*	5.5*	6.5*	11*	
Total	152911	159713	178058	202073	192512	177607	159855	108874	100

*= Countries producing less than 2MT.

China is known as "Serica" and is the birthplace of silk cultivation. The history and evolution of sericulture, or the rearing of silkworms from *Bombyx mori* (L.) moths, are lengthy and very fascinating. Although several other kinds of commercial silkworms are raised, *Bombyx mori* (L.) is the most significant and frequently utilized. Silk manufacture dates back to the Neolithic era in China. The art of silk reeling, the procedure of raising silkworms, and the cultivation of mulberries all started in China during the reign of Emperor Hwang-Ti, about 3,000 years ago. Even though there are myths about the origin of silk, Chinese tradition and Confucius' writings describe how, in the 2700th century BCE, a silk worm's cocoon fell into a tea cup while a 14-year-old girl was sitting in the garden drinking tea. The girl wanted to remove the cocoon from her tea, so she started to unroll the cocoon's thread. Then it occurred to her to weave it. As a result, Si-Liang-Chi not only learns how to raise silkworms but also how to reel silk and use it to manufacture clothing. As a result, Si-Liang-Chi was eventually honored with the title of Sien-Thsan, or "the Goddess of Silk Worms," in recognition of her contributions.

China controlled the silk trade for over two millennia, and all methods and procedures pertaining to weaving and silkworm reeling were kept under wraps. Over the ensuing decades, sericulture techniques proliferated throughout China, and other nations began to highly value silk as a precious commodity. The world's longest highway, which connected eastern China to the Mediterranean Sea, was established in 139 B.C. Along this route, new concepts and religions also travelled alongside material goods like gold, silver, and valuable stones. Due to the import and export of silk, its most valuable product, the Silk Road was historically well-known. Through the "Silk Road," which started in China and travelled via Tashkent, Baghdad, Damascus, Istanbul, and finally reached a European nation, the history of silk development may be traced back over several centuries.

The Silk Road constituted an extensive network of overland and maritime trade routes that connected regions of North Africa with vast parts of Eurasia. This interconnected system facilitated the exchange of goods, culture, and ideas across continents. Chinese silk, regarded as a luxury commodity and widely transported along these commercial corridors, became one of the most valuable items in circulation. Owing to the prominence of this product in transcontinental trade, the network came to be known as the Silk Road. The "Silk Road" network of roads facilitated the interchange of products and ideas between various cultures for over 1500 years. Just as easily as things moved down the Silk Road, so did religion and ideas.



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Along the meantime, the town developed into a multicultural metropolis. Information sharing led to innovations and new technology that revolutionized the planet. UNESCO's World Heritage List now includes portions of the Silk Road.

However, despite their concealment, the Chinese were unable to break their stranglehold on the manufacture of silk. Through Korea, sericulture practices made their way to Japan. Around 300 A.D., silk farming made its way to Japan, and later, silkworm cultivation made its way westward to India. The silkworm insect's eggs and mulberry plant seeds were reportedly transported to India while hidden in a Chinese princess's headpiece. In 522 A.D., Persian monks smuggled silkworm eggs from China to the Roman Empire, giving the emperor Justinian the knowledge of sericulture. Later, as time went on and China's monopoly on sericulture was lost, the amount of silk imported from China decreased. The rebel leader Baichu captured Canfu, the hub of the international silk trade, in 877 A.D., executed all of its residents, largely decimated the region's mulberry and silkworm populations, and imposed harsh, onerous tariffs on all international trade. For about 60 years, China's overseas trade was halted by this tragedy. Nonetheless, silk production was quite well-established in Eastern Europe and Western Asia at this time. Emperors and monarchs in Japan, Thailand, India, and Europe have all supported silk over the ages. The ninth century saw the Arabs start producing silk as well. Furthermore, sericulture was first used in Western Europe in the 12th century in France, Germany, and Italy. Since the beginning of the Industrial Revolution (1760–1850 century), the textile and silk product industries have flourished, and raw silk is in high demand. Europeans also made numerous significant advancements in the manufacture of silk during the 18th and 19th centuries. There have also been occasional and mostly unsuccessful attempts at sericulture in the United States of America.

The early colonists of Virginia, South Carolina, and Georgia continued this occupation to a certain degree, and it was brought to the New England area about the 1661 century. From the 1860s until the early 1900s, California saw a number of additional attempts at sericulture despite the United States' earlier failure. Even the commercial raising of the native ceanothus silk moth was promoted by the California sericulturists. California produced some silk during this period, but the majority of sericulture attempts failed, and the methods were never firmly entrenched in the state. Today's silk is produced using a combination of traditional methods and contemporary advancements. Global production of silk almost doubles over the last three decades, despite the fact that synthetic fibres are replacing it in many fields. Yet again, the production is dominated by the top-ranking countries only. Together, China, Japan, and India produce almost 80 percent of the total raw silk produced annually.

China dominated the raw silk production during the late 1970s after a substantial increase in the production level. This increase happened during the time when China underwent a period of great political and socio-economic changes, including the implementation of economic reforms on a large scale. These changes played a great role in the revitalization and modernization of the silk production sector in China, where the art of sericulture is believed to have been initiated almost 4,700 years ago.

Indian Scenario:

India is the second most populous country in the world and the seventh largest geographically. Approximately 60% of the population works in agriculture or related fields. An important factor in stabilizing the nation's national income is sericulture, an agro-based cottage business sometimes referred to as welfare-based employment-oriented cottage industry. India's sericulture customs are as old as its culture. India's sericulture history begins during the Buddhist era. According to ancient Sanskrit literature, India possessed a type of silkworm in very old times, as evidenced by the term "silk and cocoon." A group of traders known as the Pundarik of Poundabordhan engaged in sericulture during the ancient Indian era. From the Ramayana, the Mahabharata, and the "laws of Manu" that provide philosophical support for the idea of silk thread. The term "Pundarik" refers to a silk cocoon in Sanskrit literature. One could argue that India's silk business predates the Christian era.

One theory holds that China is where all domesticated mulberry varieties originated. In 140 B.C., a Chinese princess married a Tibetan monarch. She concealed her headgear with some mulberry seeds and silkworm eggs. Sericulture arrived in India from Tibet.



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Production volume of raw silk in India in financial year 2024, by state

Name of the state	In metric tons
Karnataka	12463
Andra Pradesh	10492
Assam	5745
Tamil Nadu	2679
West Bengal	2131
Meghalaya	1176
Jharkhand	1127
Maharashtra	764
Telangana	565
Nagaland	399
Uttar Pradesh	399
Chattisgarh	214
Odisha	132
Jammu Kashmir	117
Tripura	116
Mizoram	84
Manipur	83
Arunachal Pradesh	69
Bihar	59
Uttarakhand	42
Himachal Pradesh	25
Kerala	15
Madhya Pradesh	14
Punjab	4
Haryana	0.9
Sikkim	0.5

(Source: <https://www.statista.com/statistics/report-content/statistic/622953>)



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According to N.G. Mukherjee (1919), one of the leading Indian researchers and the author of "Genesis of Silkworm," the Aryans were the first to discover the silkworm in the Sub-Himalayan region, followed by the Chinese and others in the Ultra-Himalayan region. Some of the ancient Sanskrit terms used in India, such as "Mahabharatha," refer to the silkworms, or pataa keettal, which were introduced to the country by Chinese travellers as a gift for the monarch of Yudhishtira. Silk from China was traded throughout the Mouryan period, and silk from India appeared to be in high demand in the ancient Roman Empire a few years later. Some historians claim that mulberry sericulture was first introduced in India as late as the Fourteenth century and fifteenth centuries. Although India has traditionally produced wild silk varieties (Tasar, Eri, and Muga), mulberry sericulture is said to have arrived in this area rather late. The earliest records of mulberry silk manufacture date back to the Mughal era, when the business was thriving. From India to Great Britain, medieval historians claim that sericulture was practiced extensively in Kashmir, West Bengal, Karnataka, and other regions of India. Its history includes both periods of immense prosperity and decline for the silk business. The East India Company subsequently supported Indian silk production in order to provide raw silk to Great Britain's silk weaving facilities. During the Tipu Sultan era, silkworm cultivation was also practiced in South India. There was a massive overland trade in silk in the seventeenth century, along with other goods including cotton, opium, and indigo. Finished silk was mostly produced in Gujarat at the period, with smaller amounts also coming from the provinces of Kashmir, Bengal, Varanasi, Lahore, and Fatehpur.

West Bengal's Kasimbazar had silk manufactures by the latter half of the seventeenth century. Indian silk is now being exported to Europe by the British. As a result, Indian silk goods gain international recognition. The filature reeling units were founded in Rangpur, Kaliachak, and Murshidabad during the eighteenth century. In 1769, the East India Company invented the filature reeling. Changes in market policy over the eighteenth and nineteenth centuries were the cause of the fluctuating levels of sericulture. The revolutionary years were a severe blow to the Bengali silk industry. By the middle of the 1800s, China had supplanted Bengal as Europe's main source of silk. Raw silk exports from India were stopped by World War I (1914–1919) as a result of a drop in activity by the 1870s brought on by competition with China on both price and quality.

The Indian sericulture business benefited greatly from it during the Second World War (1939–1945). Due to the halt in the supply of raw materials needed to produce parachute textiles and their constituent parts, the allies were forced to turn to India in order to meet the need for this vital raw resource. The government started a large-scale filature expansion and implemented a number of additional policies to increase raw silk production. By the end of 1945, there were 45581 hectares of mulberry under cultivation, up from 17628 hectares in 1937–1938. At the same time, raw silk production rose from 0.69 tons in 1937–1938 to 0.95 tonnes in 1945–1946.

Karnataka Scenario:

In Karnataka, farming is not only economic pursuit; it is a way of life that is ingrained in the socio-cultural fabric of the state. Different regions' patterns of land usage, crop choice, and agricultural methods are still influenced by a variety of social and cultural factors.

Access to resources and land ownership are significantly influenced by caste and community structures. Large swaths of rich land have historically been owned by dominant agrarian groups like the Vokkaligas and Lingayats, while marginalized people frequently rely on agricultural labor for their survival. Although inheritance laws have caused land fragmentation, resulting in smaller and less productive farms, the joint family system promotes group decision-making in farming. Traditional practices and religious convictions can have a big impact on farming.

The agricultural calendar is marked with festivals such as Makara Sankranti, Pongal, and Bhoomi Puja, which also honor the connection between farmers and the soil. Astrological timings are still used by many farmers for planting and harvesting. The ecological wisdom of rural people is reflected in traditional knowledge, which includes water conservation, mixed farming, and organic composting.



Although social conventions frequently restrict their ownership rights and access to contemporary training, women make important contributions to agricultural tasks including planting, transplanting, and harvesting. Agricultural patterns are further influenced by regional variation; for example, northern districts concentrate on dryland crops like cotton and jowar, whereas coastal Karnataka excels in areca nut and paddy.

Societal institutions, cultural customs, and communal values all have a significant impact on Karnataka agriculture. These socio-cultural elements still shape the state's farming character and viability in spite of modernization's demands.

District wise silk production in Karnataka (2022-23)

District	Silk production (MT)
Mandya	3,580.51
Ramanagara	2,582.30
Chikkaballapura	1,725.34
Kolar	1,292.36
Bangaluru Rural	512.90

Year	Karnataka Raw Silk Production
2022-23	11,823 Metric Tonnes
2023-24	12,463 Metric tonnes

Source: <https://manufacturing.economictimes.indiatimes.com>,

India's sericulture business has traditionally relied on Karnataka, which is well-known for its mulberry silk. The state's enormous mulberry cultivation and substantial employment generation, especially for women and young people, demonstrate its dedication to sericulture, which has been fuelled by a tradition of more than 200 years. Despite its popularity, the sericulture industry in Karnataka faces difficulties such disease outbreaks, climate change, delayed availability and growing input costs, and shifting cocoon and silk prices. Farmer Producer Organizations (FPOs) have become a revolutionary force in tackling these problems. FPOs improve market access, lower costs, and promote information sharing among farmers by combining resources and engaging in collective bargaining. Their responsibilities also include encouraging the adoption of technology and sustainable practices, but they face obstacles like inadequate infrastructure, a lack of funding, and a lack of technical expertise. Support from NABARD and other state programs, as well as government efforts like the Seri-Plus and SERICARE Schemes, are essential for strengthening FPOs. These initiatives seek to strengthen market connections, infrastructure, and productivity.

Karnataka, known for its excellent mulberry silk, has maintained a key position in India's sericulture industry for more than 200 years (Sharma & Kapoor, 2020). From mulberry agriculture to cocoon rearing and silk yarn extraction, this ancient method of producing silk is essential to boosting rural livelihoods and strengthening rural communities (Roy, 2015). With the help of the Central Silk Board, the state government actively supports sericulture through the Department of Sericulture, which was founded in 1914. A number of programs and grants are available to farmers, such as support for mulberry and drip irrigation (DoS, 2024). With over 32% of the country's total production, the state produces the most mulberry silk in India. Mulberries are grown on more than 1.1 lakh hectares of land, offering a steady income to a wide range of farmers,



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especially small and marginal landholders (GoK, 2023). Sericulture requires a lot of labor and creates job opportunities at different manufacturing phases. Millions of people, particularly women and young people, find work in this industry doing anything from raising silkworms to weaving elaborate silk garments (GoI, 2022).

According to Buhroo et al. (2018), its importance goes beyond financial gains to support sustainable land management techniques. Mulberries, the major food source for silkworms, need fields that are kept up, which promotes water management and soil conservation practices (Vijayan et al. 2021). Sericulture also helps farmers diversify by providing a high-value product in addition to conventional farming methods (Altman & Farrell, 2022). However, the Karnataka sericulture industry faces a number of difficulties, including the potential for farmer profitability to be impacted by changes in silk prices as well as the rising cost of inputs (Sajan Andrews & Geethakutty, 1994). Sustainable production is also threatened by problems including water scarcity, disease outbreaks in silkworms, and climate change (Ram et al. 2016).

In Karnataka, sericulture is the cornerstone of rural development. The state can empower farmers, enhance livelihoods, and guarantee the long-term viability of this vital thread in India's economic and cultural fabric by encouraging the establishment and expansion of FPOs. Using Farmer Producer Organizations (FPOs) to revitalize Karnataka's sericulture offers a big chance to solve the industry's urgent problems. FPOs contribute to the sustainability of the industry by strengthening farmers' bargaining power, expanding their access to markets, and encouraging sustainable practices through the promotion of collective action. Even with the advancements, problems including funding constraints, inadequate infrastructure, and technology gaps still require addressed. To overcome these obstacles, financial institutions and government programs must provide effective support. Maintaining Karnataka's leadership in sericulture will depend on strengthening FPOs (Farmer Producer Organizations) through focused capacity-building programs, better financing availability, and strong infrastructural development. FPOs' success will depend on a cooperative strategy engaging stakeholders from the public and private sectors as they continue to change and adapt. This all-encompassing approach will not only guarantee sericulture's financial sustainability but also improve the lives of innumerable farmers, preserving the state's rich history and opening the door to a more sustainable and successful silk producing industry in the future.

History of Sericulture in Tumkur District:

In Karnataka's Tumkur district, sericulture has a long history and has made a substantial contribution to the state's silk industry. The district is renowned for its customs and is a part of the more than 215-year-old Karnataka sericulture story. The introduction of novel silkworm races and cross-breed combinations, among other sericulture technologies and practices, has been made possible in large part by the region.

Important facets of Tumkur district's history of sericulture:

- 1. Traditional Practice:** Many farmers in Tumkur have long engaged in sericulture, especially in regions where silkworm breeding and mulberry agriculture are well-established.
- 2. Function in Karnataka's Silk Industry:** Tumkur is a component of the larger Karnataka sericulture scene, which plays an important role in the manufacturing of silk in India.
- 3.** Tumkur's significance in the production of silkworm seeds was highlighted in 1960 when portions of the district, notably Tumkur Hobli, were declared as seed areas.
- 4. Technology Adoption:** A number of sericulture technologies, such as the introduction of novel silkworm races and cross-breed combinations like SL-KSPM and CSR2, have been used in Tumkur.
- 5. Rainfed Sericulture:** In Tumkur, initiatives have been undertaken to create and advance rainfed sericulture systems, modifying the technique to suit various agroclimatic circumstances.



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6. **Impact of Pests:** The district has also had to deal with issues like the detrimental snail, which has impacted mulberry farming in some places.

7. **Modernization and Challenges:** Although Tumkur has contributed to Karnataka's sericulture's modernization, the sector has been affected in certain areas by urbanization and water constraint.

Silk and its Trade:

Below are some significant details on the evolution of silk during the ancient era:

- 1) "The trade in silk began prior to the second century BC.
- 2) Later, ambassadors with presents, including silks, travelled to Mesopotamia and Persia on behalf of the Chinese emperor, Han Wu Di.
- 3) It arrived at Baghdad in 97 AD, and significant silk discoveries were made.
- 4) Around 400 BC, the Greeks and Romans started discussing Seres, the Kingdom of Silk.
- 5) Silk was worn by Heliogabalus, the Roman Emperor (218–222 AD).
- 6) Marcellinus Ammianus wrote in 380 AD that "the use of silk which was once confined to the nobility has now spread to all classes without distinction, even to the lowest." Over the ages, the desire for silk only became stronger.

Conclusion:

The present study highlights the roots of sericulture by tracing its origins to China in the ancient era, revealing how knowledge of silk slowly spread through the course of trade. The Silk Road has been instrumental in carrying silk culture from China to other parts of the world, leading to the development of sericulture in these regions, including India. Thus, sericulture cannot be seen as an agricultural practice, but rather as an historical phenomenon, which can only be appreciated by understanding its historical background, thereby allowing us to understand its development in recent times in a more informed manner.

References:

1. Abbott, P. (2009, February 17). *Rethinking silk's origins*. *Nature*, 457, 945. <https://doi.org/10.1038/457945a>
2. Altman, A., & Farrell, G. (2022). *High-value agriculture and rural diversification*. Springer.
3. Anitha, R. (2011). Indian silk industry in the global scenario. *EXCEL International Journal of Multidisciplinary Management Studies*, 1(3), 45–52. ISSN: 2249-8834
4. Anitha, R. (2013). Indian silk industry in the global scenario: A case study. *International Journal of Research in Commerce, Economics & Management*, 3(6), 45–50.
5. Buhroo, A. A., Kamili, A. S., Ganai, N. A., & Malik, M. A. (2018). Sericulture as a sustainable agro-based enterprise. *Journal of Entomology and Zoology Studies*, 6(3), 1235–1240.
6. Central Silk Board. (2021). *Indian silk industry at a glance*. Ministry of Textiles, Government of India. <https://www.csb.gov.in>
7. Department of Sericulture (DoS). (2024). *Sericulture development programmes in Karnataka*. Government of Karnataka.
8. Government of India (GoI). (2022). *Annual report 2021–22: Ministry of Textiles*. Ministry of Textiles. <https://texmin.nic.in>
9. Government of Karnataka (GoK). (2023). *Economic survey of Karnataka*. Planning, Programme Monitoring & Statistics Department.



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10. Mukherjee, N. G. (1919). *Genesis of the silkworm*. Calcutta University Press.
11. Nanavaty, M. (1965). *Textiles and costumes of India*. D. B. Taraporevala Sons.
12. Naidu, S. (2020). The global silk market and its implications for Indian farmers. *Journal of Rural Development*, 39(2), 233–247.
13. Patil, R. B. (2008). *Historical perspectives of sericulture in Karnataka*. Karnataka University Press.
14. Ram, P., Singh, B., & Kumar, S. (2016). Climate change impact on sericulture and adaptation strategies. *Indian Journal of Sericulture*, 55(1), 1–8.
15. Research and Information System for Developing Countries. (2019). *India's silk exports and global competitiveness*. RIS. <https://www.ris.org.in>
16. Roy, S. (2015). Sericulture and rural livelihood security in India. *Asian Journal of Development Studies*, 7(2), 89–102.
17. Sajan Andrews, J., & Geethakutty, P. S. (1994). Price instability and farmer income in sericulture. *Indian Journal of Agricultural Economics*, 49(3), 385–392.
18. Sharma, R., & Kapoor, A. (2020). Karnataka's leadership in mulberry silk production. *Indian Journal of Rural Development*, 39(4), 521–536.
19. Statista. (2024). *Production volume of raw silk in India by state*. <https://www.statista.com>
20. Vijayan, K., Tikader, A., & Roy, G. C. (2021). Sustainable mulberry cultivation practices for sericulture. *Indian Journal of Sericulture*, 60(2), 95–103.
21. Yaseen, M., Ahmad, S., & Bhat, M. A. (2013). Global silk production and trade: Trends and challenges. *Journal of Textile Science & Engineering*, 3(2), 1–6.