International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Sericulture in Rural Assam: A Key Aspect for Entrepreneurship Development

Chayanika Gogoi

Assistant Professor, Department of Economics, Jogananda Deva Satradhikar College, Bokakhat-785612, Assam

Abstract:
The current global scenario certainly presents enormous opportunities for the Indian silk industry. Agriculture and agro-based industries are crucial to the growth of rural economies in developing nations such as India. Sericulture is a traditional agro-based economic activity that has historically been important in terms of job creation and income generation. Given the industry's off-farm and on-farm employment possibilities, it has the potential to offset the seasonality impact on the rural economy. The need for relatively little initial investment makes this industry more appealing to rural entrepreneurs. Mulberry, Oak Tasar, Muga, and Eri are the four different types of silk that are uniquely produced in the North East India. Assam produces more eri and muga silk than mulberry and tasar. Women are better suited to the sericulture sector because it relies heavily on in-house or off farm activities. To understand the scope of employment generation and the growth of different silk cultures in Assam a decadal analysis has been done considering the number of families engaged in sericulture and production of silk yarn from 2011-2021. It has been observed that ericulture has grown in popularity over time since it is comparatively cheap and generates more income than other forms of sericulture. Moreover the growth of sericulture industry in terms of families engaged and production of silk yarn was not always stable over the years. Price fluctuations, lack of proper market, lack of transportation and storage facilities, poor finance, lack of technology penetration, low productivity, and the industry's rural nature are the key obstacles that are holding back the industry to grow to its full potential.

Keyword: Sericulture, entrepreneurship, production, employment generation

INTRODUCTION:

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 and largest producer of raw silk in the world, accounting for about 18% of the world's total raw silk production. The production process is made up of a complex network of related and specialized tasks. The cultivation of food plants for silkworms, the rearing of silkworms for the production of raw silk, the reeling of cocoons for the unwinding of the silk filament, and other post-cocoon processes like twisting, dyeing, weaving, printing, and finishing are the main activities involved in a sericulture industry. Agriculture and agro-based enterprises are crucial to improving the rural economy in emerging nations like India (Bukhari and Kour 2019). It is a village-based enterprise in India that is practiced in over 53,814 communities that employs about 6 million

people, and also has the potential to give farmers a steady income (Ghosh and Sarkar 2017). Additionally, it is the only cash crop in the farming sector that provides returns within 30 days.

Sericulture has been practiced in Assam from the earliest times. Most people have the knowledge how to rear silkworms by reeling, spinning, and weaving. The glittering golden thread known as Muga silk is Assam's first GI-registered product. Muga silk is extremely popular in the global silk market. Assam is the third-largest producer of silk in the nation, producing 94% Muga silk and 62% Eri silk. The Assamese people's socio cultural traditions heavily rely on this natural silk, particularly for weddings and various festivities(Government of Assam, Department of Agriculture).

SIGNIFICANCE OF THE STUDY:

Sericulture is emerging as one of the major sectors through which profitable entrepreneurship can be practiced all over the globe. Among all the northeastern states Assam is endowed with a rich variety of silk farming. However production and productivity has not been satisfactory in the past. This paper tries to understand the pattern of production of silk yarn and growth in the employment pattern so that further research can help in increasing the same in rural Assam.

OBJECTIVES OF THE STUDY:

1. To evaluate the growth of employment in Assam's sericulture industry.
2. To examine the trend of raw silk production in Assam.
3. To suggest ways to boost the sericulture industry as a whole.

METHODOLOGY:

During the research, an exhaustive review of secondary data from numerous sources, as specified in the references, was conducted. Reports from the Directorate of Sericulture, Government of Assam; Central Silk Board, Ministry of Textiles, Government of India; and Directorate of Economics and Statistics, Government of Assam publications served as the sources of secondary data for the study, which was carried out using the descriptive method. The analysis is based on the findings of numerous researchers whose work served as a springboard for producing the current research work.

REVIEW OF LITERATURE:

It can be inferred from the whole discussion that ericulture holds a distinct place among all the varieties of silk in terms of its contribution to overall silk production as well as the creation of jobs. Its production has increased more quickly than that of muga and mulberry throughout time.

De and Das in 2010 mentions that the contribution sericulture makes to the rural poorer segment of the population, especially that of women who are mostly involved in such activities, illustrates the importance of sericulture to Assam's economy. Thus, it aids many of them in escaping poverty and improving their level of living. The study's policy implications are that, in the lack of other chances for people in rural areas, especially women, to use their current skills, ericulture should be prioritized. They may support themselves more easily without having to make significant investments because it requires less capital and carries lower risks than other allied activities.

Sericulture is a great industry that combines agriculture and industry to provide employment and numerous business options, such as silkworm seed reeler, twister, weaver, producer, farmer-cum-rearer. All these activities generate employment that leads to rural development. Sericulture has the ability to

provide jobs for the majority of Assam's population. Because no ceremony can be imagined without employing silk, there will always be a demand for silk yarn and fabric throughout the Indian subcontinent (Saikia and Ghosh 2021).

Anitha (2011) revealed in her study "Status of Silk Industry in India" that sericulture is ideally suited for improving the country's rural economy. This sector has been identified as a sector of the Indian economy with strong potential to create jobs and contribute to foreign trade with Japanese technology and cooperation. The Central Silk Board has recently been able to evolve and popularize bivoltine silkworm races that can yield raw silk of international standard. With these races, India can aim to expand its domestic raw silk sales outside its borders, assuming parallel improvements in cocoon marketing and processing.

In his analysis, Pandey (2003) noted that one of the main sources of state revenue in Assam is the silk sector. Additionally, it is a significant employer, particularly in rural areas. Out of the total of Rs. 190 crore created annually by the silk industry in Assam, Eri contributes Rs. 31.5 crore, whilst muga contributes Rs. 40 crore, and pat silk contributes Rs. 120 crore.

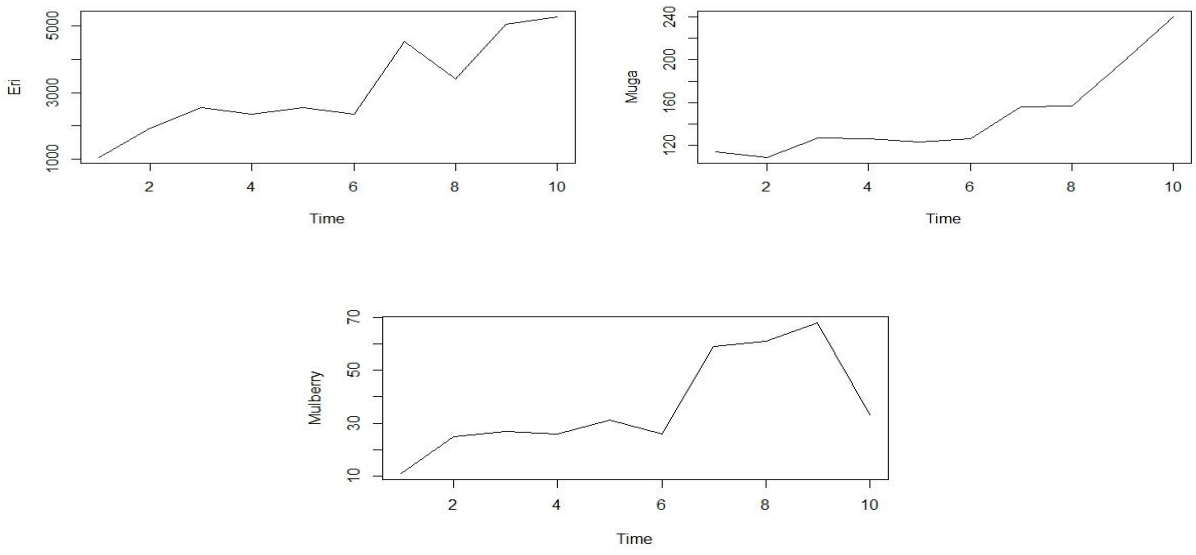
The study by Kherkatary and Daimari in 2017 makes an effort to analyze the trends in employment growth and raw silk output between 1997–1998 and 2013–2014 in Assam. The analysis shows that growth rates in both employment creation and the production of raw silk are not smooth and continuous but rather vary over time. The growth rates even occasionally exhibit a downward tendency. Eri (0.14) is the sub-component of raw silk production with the highest growth rate, followed by mulberry (0.09), and muga (0.13). (0.06).

RESULTS AND DISCUSSION:

Production of silk yarn:

Figure 1 shows the production of silk yarn namely eri, muga and mulberry in metric tonnes for the decade from 2011-12 to 2020-21 through a time series analysis.

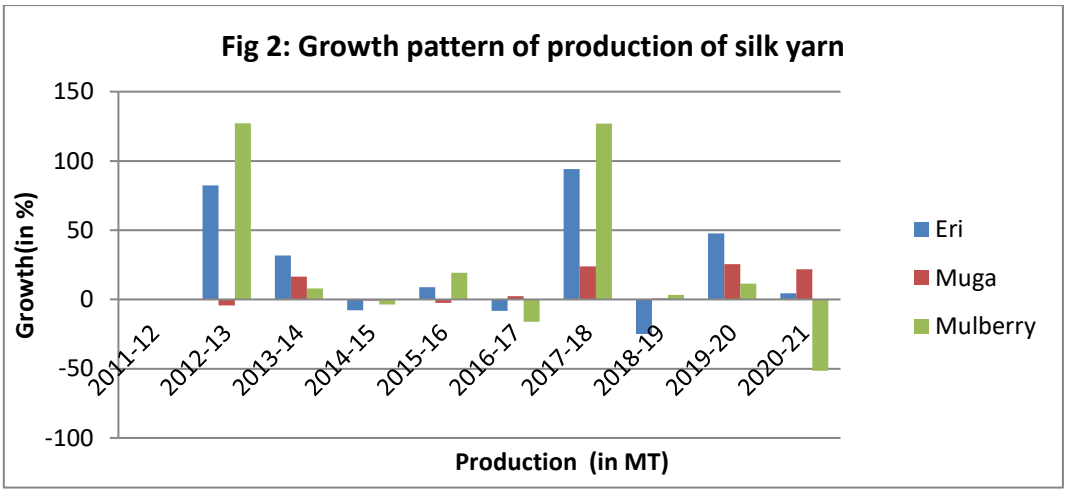
Fig 1: Time series analysis showcasing the production of silk yarn (in MT)



Source: Assam Economic Survey Data compiled

Figure 1 show the time series analysis of production of silk yarn over the years from 2011-2021. It is seen that the production of Eri was highest amongst all the fabrics followed by Muga and Mulberry respectively. The production of Eri was highest in the years 2020-21 (5275 MT), 2019-20 (5048 MT) and 2017-18 (4550 MT). It was least in the year 2011-12. In Muga, the production was highest in the years 2020-21 (240 MT), 2019-20 (197 MT) and 2018-19 (157 MT). It was least in the year 2012-13. In case of Mulberry production, the production was highest in the years 2019-20 (68 MT), 2018-19 (61 MT). It was least in the year 2011-12.

The same is shown as percentage growth rate in the figure below:



Source: Statistical Handbook of Assam

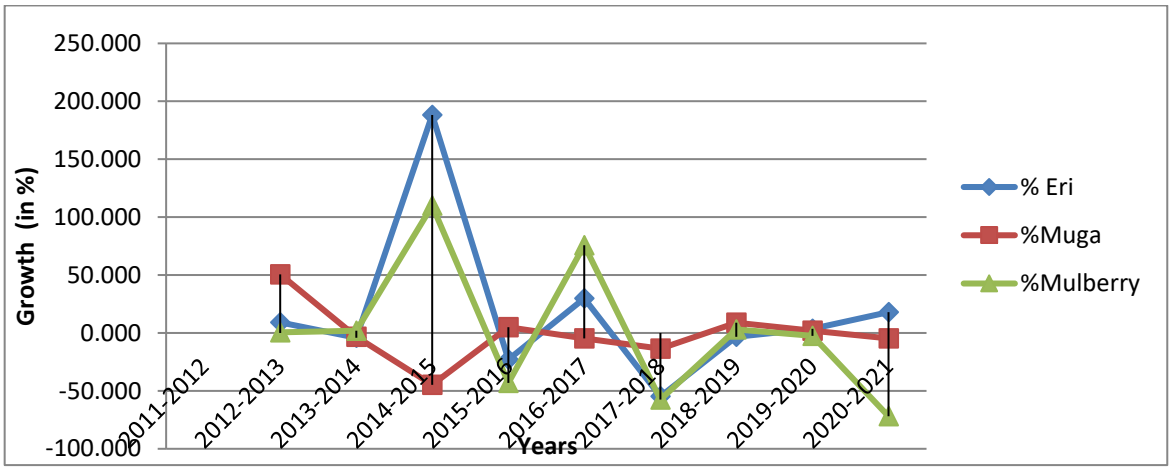
In the year 2017-18, the percentage growth rate was 94% which was the highest. The percentage growth rate of Muga was highest (25%) in the year 2019-20. In muga the rate was highest in the year 2012-13(127%).

Eri silk production in Assam has expanded due to an increase in the number of ericulture families and land under eri host plant. Despite a lack of product variety in comparison to muga and mulberry there is no shortage of buyers in the market. It is still cheaper and hence accessible to a large portion of the middle and lower income population. Furthermore, its byproduct pupae generate some cash while also offering alternative protein food to poor eri practicing families. Muga being an outdoor sericulture activity is frequently influenced by variations in weather, particularly rainfall, and so has been strongly dependent on the climatic condition. On the one hand, it is an expensive venture as it includes greater risk than other sericulture activities such as eri. The gradual decline in Assam's muga proportion of total raw silk production can be linked to the significantly faster pace of expansion of eri silk production. Mulberry silkworms are quite susceptible to several illnesses. As a result, it also has a significant level of risk, and the rearers have little interest in cultivating mulberry silkworm (De and Das, 2010).

Families involved in production:

In the year 2014-15, there was highest growth of families that were practicing Ericulture (188%). For muga, it was highest in the year 2012-13 (50%). It was 109% for Mulberryin the year 2014-14 which was highest amongst all the three silk cultures for the decade. The same is shown in the figure below:

Figure 3: Families engaged in Sericulture (in nos.)

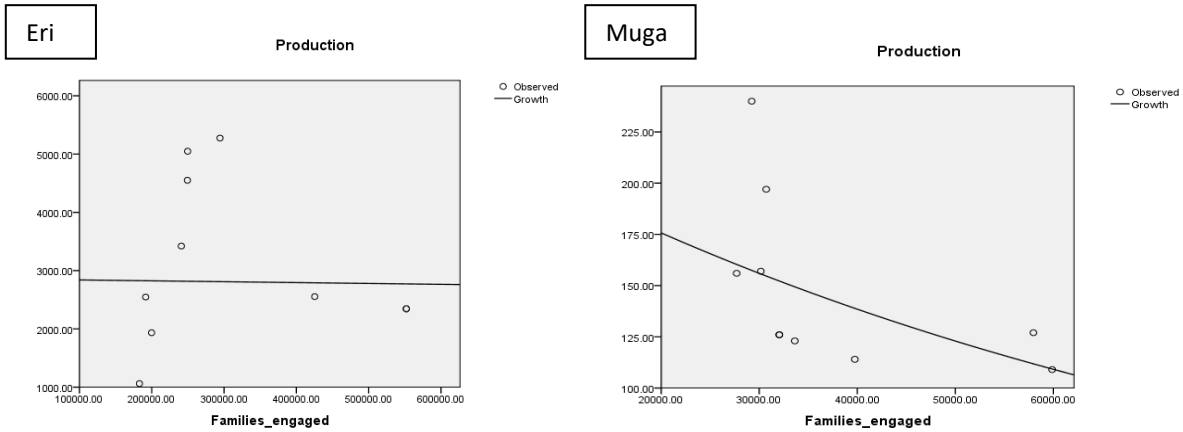


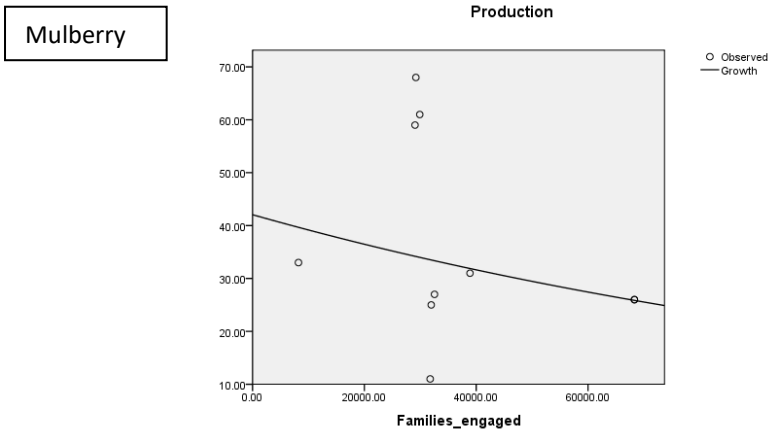
Source: Statistical Handbook of Assam

Because of seasonality of the sector, the share of sericulture, particularly ericulture, in the workforce decreased substantially. In addition, many young people 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. Because of the drop in per capita land ownership and the conversion of areas to other very lucrative agriculture, like tea gardens, the number of people practicing muga culture has decreased.

Relation between production of silk yarn and families involved in production:

Figure 4: Relation between production and families involved:





Source: Directorate of Economics and Statistics data compiled

From the above figure it is seen that the numbers of families engaged in ericulture, muga and mulberry has increased over the years only till a certain point. Later the numbers have been reducing till the end of survey period. The growth in production has also not been consistent. It has first increased in the initial years followed by fluctuating growth thereafter. The production has been gradually increasing with Mulberry showing the maximum growth followed by muga and eri respectively. This shift may be due to factors mentioned before in the discussion.

Milestones taken to boost up the sericulture economy:

- The Central Silk Board (CSB) organizes three types of programmes by providing short term classes at the national level. The first is available to everyone, the second to service personnel, and the third to farmers. CSB also organizes intensive training programmes from time to time.
- The International Centre for Training and Research in Tropical Sericulture (ICTRETS) in Mysore offers three international tropical sericulture courses. Students can choose sericulture as their subject of study in the UGC-approved vocational scheme. As a result, sericulture offers a diverse range of career options to people from all walks of life.
- Regional Extension Centres and Technical Service Centres of both State and Central Sericulture Boards supply advanced-staged larvae to rearers; rearing equipment and other raw materials, such as mulberry samplings, are provided at a nominal cost to rearers. Bivoltine rearers are eligible for an incentive bonus.
- Crop insurance systems have been specifically designed for bivoltine farmers to protect against failure. Farmers in isolated rural areas are given brochures or other important information about farming methods, the use of bed disinfectants, insecticides, and so on.

POLICY RECOMMENDATIONS:

- Government initiatives through Central Silk Board and Integrated Scheme for Development of Silk Industry have not penetrated to all the rural economies equally. The sericulture industry is highly scattered and unorganized. Introduction of high yielding variety of silk will boost productivity.
- Reeling and spinning processes can be made simpler with the aid of new technology. Advanced and newer forms of technology can save both time and the cost of production.

- Timely dose of insecticides and pesticides will help increase the life span of cocoons by hindering the attack of various pests and insects.
- Villages can cluster up together for better networking and marketing facilities.
- Anti dumping duty by government will protect the Indian Silk market from the cheap imported fabrics
- Skill upgradation of the people working in the silk industry through structured and specially designed training programmes will increase productivity
- Cost effective techniques can be evolved through focused research work thereby developing superior and hybrid breeds of silk.
- Setting up of a price regulating mechanism at the state level will help the marginal and small traders to get a fair price.

CONCLUSION:

The development of the silk industry is ultimately is in the interests of all stakeholders. After all, it ranks among the nation's oldest industries, not just in Assam.The proportions of various sericulture activities in Assam's NSDP have not been significant or trended in one way. However, if the commercial aspects of sericulture are taken into account its relevance cannot be diminished. It is important because of its contribution to sustain a substantial portion of the rural population and encourage rural women to secure their own livelihoods. It is an ideal occupation for weaker sections of the society because of it requires low investment, has low gestation period and provides higher returns. This makes the industry highly suitable to small and marginal farmers. Hence the industry acts as a tool for economic reconstruction of the economy and provides vibrancy to the rural economy. Entrepreneurial activities in sericulture will boost the performance of the country at large.

REFERENCES:

1. Bukhari, R. and Kour, H. 2019. Background, Current Scenario and Future Challenges of the Indian Silk Industry. International Journal of Current Microbiology and Applied Sciences., 8(05): 2448-2463.
2. Sarkar, K., Majumdar, M., & Ghosh, A. (2017). Critical analysis on role of women in sericulture industry. *International Journal of Social Science*, *6*(3), 211-222.
3. De, U. K., & Das, M. (2010). Economics of Sericulture in Assam: A Comparative Analysis of Three Cultivars. *South Asia Economic Journal*, *11*(2), 309-336.)
4. Saikia, M., & Ghosh, K. (2021). An Analysis of Families Engaged in Silk Production, Trend of Raw Silk Production and Area under Silkworm Food Plant Cultivation in Assam. *Saikia & Ghosh Biological Forum-An International Journal*, *13*(4), 51. www.researchtrend.net
5. Anitha, R. (2011). Indian Silk Industry in the Global scenario. *International Journal of Multidisciplinary management studies*, *1*(3), 100-110.
6. (Pandey, P. (2003), "Rs. 405 Lakhs pumped into revive silk industry", The Hindu Newspaper, Retrieved October 15, 2022, from http://www.thehindu.com/2003/10/21/stories/2003102108010500.htm
7. Kherkatary, A., & Daimari, P. (2017). Growth Pattern in Raw Silk Production and Employment Generation in Sericulture in Assam: An Economic Analysis.

8. Government of Assam, Directorate of Sericulture, Retrieved October 20, 2022 from https://sericulture.assam.gov.in

APPENDIX:

Table 1: Production of Silk Yarn (in MT)						
Year	Eri	Growth (in %)	Muga	Growth (in %)	Mulberry	Growth (in %)
2011-12	1061	-	114	-	11	-
2012-13	1934	82.28087	109	-4.38596	25	127.27273
2013-14	2546	31.64426	127	16.51376	27	8
2014-15	2345	-7.89474	126	-0.7874	26	-3.703704
2015-16	2554	8.91258	123	-2.38095	31	19.230769
2016-17	2345	-8.18324	126	2.439024	26	-16.12903
2017-18	4550	94.02985	156	23.80952	59	126.92308
2018-19	3421	-24.8132	157	0.641026	61	3.3898305
2019-20	5048	47.55919	197	25.47771	68	11.47541
2020-21	5275	4.49683	240	21.82741	33	-51.47059
Source: Assam Economic Survey						

Table 2: Growth Pattern of families engaged in Sericulture in Assam (in nos.)						
Year	Eri	Growth (in %)	Muga	Growth (in %)	Mulberry	Growth (in %)
2011-12	183000	-	39750	-	31766	-
2012-13	199763	9.160	59874	50.626	31955	0.595
2013-14	191566	-4.103	57966	-3.187	32541	1.834
2014-15	552063	188.184	32045	-44.718	68298	109.883
2015-16	425382	-22.947	33622	4.921	38887	-43.063
2016-17	552063	29.781	32045	-4.690	68298	75.632
2017-18	249295	-54.843	27690	-13.590	29059	-57.453
2018-19	240939	-3.352	30164	8.935	29905	2.911
2019-20	249615	3.601	30710	1.810	29205	-2.341
2020-21	294419	17.949	29231	-4.816	8207	-71.899
Source: Assam Economic Survey						