Sericulture in Assam: An Overview

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Abstract

Sericulture plays a vital role in uplifting the rural economy of Assam because a large number of populations find employment in the state’s famous muga and eri silk industry. The increasing demand for eri and muga globally has not only given this industry a unique identity but also a scope for self-employment to the rural youths. The people of Assam have been traditionally practising sericulture particularly mulberry, muga and eri. Nature has endowed Assam with favourable climatic and environmental conditions which make her homeland of nature for various silk producing worms and their food plants. But due to many constraints, the overall development of this sector is very poor. In this paper an attempt has been made to assess the status of sericulture in Assam and find out the problems associated with it and suggest some remedial measures.

Key words: Sericulture, self-employment, environmental, development.

Introduction

India enjoys a unique distinction of being the only country in the world producing all varieties of natural silk viz., mulberry, tasar, oak tasar, eri and muga. Among the commercially exploited silkworms, eri silkworm completely domesticates multi-voltine species under non-mulberry sector that is reared throughout the year. The advent of eri culture in the country is lost into antiquity but the fact remains that it has close link with culture and tradition of people of north-east India as the rural folk maintains this culture primarily to meet the domestic demand of warm clothing besides treating the pupae as a delicacy. Apart from the north-east region, eri culture is also practised in the states of West Bengal, Bihar and Orissa (Krishna Rao, 2003). Sericulture also known as “Industry of the Poor” is an agro-based industry, the end product of which is silk, “the queen of fabrics”. Rearing of eri cocoon and spinning as well as weaving of endi clothes has been an integral part of the rural economic activities, especially of the rural women in Assam. Though both the male and the female folk of all sections of rural population have been engaged in different sericulture activities, tribal women have been predominant in the rearing and weaving of eri raw silk and endi textiles, who in addition to their daily household activities use their leisure time, and with the help of their traditionally inherited knowledge produce useful but
comparatively cheaper endi clothes. The activities not only help to increase their household income but also help many of them to come out of the acute poverty. Moreover, these women become economically and thus socially more empowered. An attempt has been made in this paper to throw some light on the role of sericulture in the economy of Assam and assess the major problems associated with the development and suggest some policy making for the upliftment of sericulture in the state.

Sericulture in India

India has a unique distinction of being the only country in the world, producing all these four major varieties of silk – mulberry, tasar, eri and muga commercially. Silk has been an inseparable part of Indian culture, tradition and economy over thousands of years. On social and religious occasions silk apparels are used, particularly by the women folk. At present, silk is produced in almost all the states of India. Among those Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal, Assam, Jammu and Kashmir and Jharkhand are the traditional silk producing states while the others are non-traditional sericulture states. Production of mulberry raw silk is mainly confined to the states of Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal which together account for about 98.45 per cent of the country’s total mulberry raw silk production (Central Silk Board, 2005). Karnataka is leading among all the mulberry silk producing states followed by Andhra Pradesh and Tamil Nadu. Tasar industry has been a traditional practice of tribal and hill folks inhabiting in the forests of central India. It covers Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh, Orissa, Jharkhand, Bihar and West Bengal where Arjun and Asan food plants are abundantly available. India enjoys the world monopoly for the fabulously famed golden yellow muga silk which is not found anywhere on a large scale except Assam. Of course, it is produced in negligible quantity in Mizoram, Meghalaya, Arunachal Pradesh and Nagaland. Efforts have also been made to introduce muga culture in Mysore, Muradabad (U.P.), which have not yet met with success. The production of eri silk is mainly confined to the state of Assam, while on a small scale it is also produced in Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland, Bihar and Orissa. Assam occupies the pivotal position in the production of eri silk.
Over the last six decades Indian silk industry has registered an impressive growth both horizontally and vertically. Plans and schemes implemented by the central and the state agencies and relentless efforts of thousands of dedicated persons in the fields of research and extension have helped in this context. The sericulture industry has witnessed a quantum jump in raw silk productivity. The new technology, besides doubling yields has also led to qualitative improvements in cocoon production with considerably reduced rendition and has also helped break the climate barrier.

### Sericulture in North-East India

The north-eastern region of India has been traditionally practising sericulture, particularly mulberry, muga and eri. The north-eastern region started practising oak tasar culture only from 1975-76. Now, this area produces all the four major varieties of silk. The north-east India contributed 16.44 per cent of total raw silk production in India in 1951-52, which declined to 9.17 per cent in 2005-06 due to relatively faster growth of production in other parts of the country. Out of the four components of silk, the north-eastern region enjoys monopoly in muga-culture. Its production has gone up from 45 MT in 1951-52 to 110 MT in 2005-06 with a little fall in production during 1981-82 due to unfavorable climate. Like muga silk, the north-eastern region has been enjoying partial monopoly in eri producing more than 90 per cent since 1951-52. In case of mulberry, contribution of north-eastern region to total

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**Table 1: Silk statistics of India**

(Source: DGCIS, Ministry of Commerce, Govt. of India.)

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<tr>
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<tbody>
<tr>
<td>Production of silk (Total)</td>
<td>MT</td>
<td>16319</td>
<td>15742</td>
<td>16500</td>
<td>17305</td>
<td>18475</td>
</tr>
<tr>
<td>Mulberry</td>
<td>MT</td>
<td>14617</td>
<td>13970</td>
<td>14620</td>
<td>15445</td>
<td>16525</td>
</tr>
<tr>
<td>Tasar</td>
<td>MT</td>
<td>284</td>
<td>315</td>
<td>322</td>
<td>308</td>
<td>350</td>
</tr>
<tr>
<td>Eri</td>
<td>MT</td>
<td>1316</td>
<td>1352</td>
<td>1448</td>
<td>1442</td>
<td>1485</td>
</tr>
<tr>
<td>Muga</td>
<td>MT</td>
<td>102</td>
<td>105</td>
<td>110</td>
<td>110</td>
<td>115</td>
</tr>
<tr>
<td>Production of silk fabrics</td>
<td>Rs./Crore</td>
<td>8280</td>
<td>8201</td>
<td>8870</td>
<td>9812</td>
<td>9240</td>
</tr>
<tr>
<td>Silk Imports</td>
<td>Rs./Crore</td>
<td>647</td>
<td>628</td>
<td>607</td>
<td>780</td>
<td>673</td>
</tr>
<tr>
<td>Mulberry acreage</td>
<td>Ha.</td>
<td>194463</td>
<td>185120</td>
<td>171959</td>
<td>179065</td>
<td>191183</td>
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</tbody>
</table>
production of India is insignificant. Though production in north eastern region increased from 9.00 M.T. in 1951-52 to 71 M.T. in 2005-06 through various ups and down, its share to total Indian mulberry silk production declined from 1.44 per cent 1951-52 to 0.46 per cent in 2005-06. Lastly, in case of tasar, production of north-east India and its contribution to total production of the country is negligible. Its contribution has always been less than one per cent to the production of India. Still this practice is at infant stage in this region.

Table -2: Production of raw silk in India and its north-east region (M.T.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Mulberry India</th>
<th>Mulberry NER</th>
<th>Tasar India</th>
<th>Tasar NER</th>
<th>Eri India</th>
<th>Eri NER</th>
<th>Muga India</th>
<th>Muga NER</th>
<th>All India</th>
<th>Total Silk Production in NER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-52</td>
<td>625</td>
<td>9.00</td>
<td>124</td>
<td>0.00</td>
<td>100</td>
<td>93.00</td>
<td>45.00</td>
<td>45.00</td>
<td>894.00</td>
<td>147.00</td>
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<tr>
<td>1961-62</td>
<td>1308</td>
<td>13.07</td>
<td>202</td>
<td>0.00</td>
<td>132</td>
<td>120.0</td>
<td>52.64</td>
<td>52.64</td>
<td>1694.64</td>
<td>185.71</td>
</tr>
<tr>
<td>1971-72</td>
<td>2046</td>
<td>12.00</td>
<td>314</td>
<td>0.00</td>
<td>168</td>
<td>166.0</td>
<td>72.00</td>
<td>72.00</td>
<td>2600.00</td>
<td>250.00</td>
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<tr>
<td>1981-82</td>
<td>4801</td>
<td>16.0</td>
<td>257</td>
<td>20.00</td>
<td>147</td>
<td>125.0</td>
<td>44.00</td>
<td>44.00</td>
<td>5249.00</td>
<td>205.00</td>
</tr>
<tr>
<td>1991-92</td>
<td>1065</td>
<td>60.3</td>
<td>329</td>
<td>1.00</td>
<td>704</td>
<td>655.8</td>
<td>73.52</td>
<td>73.52</td>
<td>11764.52</td>
<td>790.62</td>
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<tr>
<td>1999-00</td>
<td>1394</td>
<td>80.64</td>
<td>211</td>
<td>1.14</td>
<td>974</td>
<td>682.5</td>
<td>84.70</td>
<td>84.70</td>
<td>15213.70</td>
<td>849.04</td>
</tr>
<tr>
<td>2005-06</td>
<td>1544</td>
<td>71.0</td>
<td>308</td>
<td>3.00</td>
<td>1442</td>
<td>1403.2</td>
<td>110</td>
<td>110</td>
<td>17305.0</td>
<td>1587.2</td>
</tr>
</tbody>
</table>

Source- Office of the Directorate of Central Silk Board (North Eastern Region), Guwahati, Assam.

Sericulture in Assam

Sericulture has been a practice of the village folk of Assam since time immemorial. The erstwhile undivided Assam is known to be the original home of eri and muga silk in the world. Nature has endowed Assam with favourable climatic and environmental conditions, which make her the natural homeland of various silk producing worms and their food plants. However, mulberry and tasar are not produced extensively in Assam. Out of four sericulture products, eri occupies the first position in terms of production and generation of employment in Assam, though at all India level mulberry occupies the first position. (Directorate of Sericulture, Government of Assam, 2011). Sericulture has always been a subsidiary occupation of the rural women folk of the Brahmaputra valley. Though sericulture is
practised in almost all the districts of Assam, it is highly concentrated in the districts of Karbi Anglong, North Cachar Hills, North Lakhimpur, Demaji, Barpeta, Kokrajhar, Sibsagar, Dibrugarh, etc.

Objectives of the Study
The primary objectives of the study are
1. To assess the status of the sericulture in Assam
2. To find out the important problems of sericulture in Assam, and suggest some remedial measures for the development of the sericulture sector.

Methodology of the Study
Though the study is based on both primary and secondary data, more emphasis has been given to secondary data. Secondary data are collected mainly from various Census Reports, Directorate of Sericulture, Government of Assam, Directorate of Economics and Statistics, Government of Assam, Economic Survey of Government of India, Office of the Directorate of Central Silk Board (North-Eastern Region), Government of India, ARTFED, different books, journals and internet. Primary data are collected from the family engaged in eri and muga production in Sibsagar and Dibrugarh districts of Assam.

Problems of Sericulture in Assam
Sericulture has been an occupation of many rural Assamese people for a long time. But it is still at the subsistence level. Also it is not growing at a very fast rate, which is clear from the engagement of a poor percentage of the whole population or workers in Assam till now. The major problems of sericulture are:
1. Lack of Education among the Rearers: Sericulture of Assam is mostly carried out by the illiterate or semi-literate persons. Not a single postgraduate or other degree holders is observed among the sample rearing families. Usually educated youths do not come forward to take up this occupation. Sericulture is mostly run by the illiterate people of the society, who have no idea about scientific as well as commercial process of rearing of silkworms.
2. Attitude of the Society: It is very difficult for the traditional eri rearers to be free from the customs, usages and conventions, which are intimately bound up with the cultural complexity in Assam. The illiterate and literates alike are not free from the prejudices against sericulture. In this modern commercial age some sections are still there who accord lower status in the society to the persons who have been engaged in rearing of silkworms.
3. Lack of Healthy Seeds: The most serious and basic problem that sericulture in Assam faces is the scarcity of quality and healthy seeds of standard breed for commercial rearing under natural atmosphere. The government institutions have failed to supply required seeds to the rearers in proper time.
4. Shortage of Feeds of Silkworm: Shortage of eri/muga feeds is another important problem
faced by the rearers who are interested to engage in the rearing activities. The growth of feed leaves does not match with the growth of requirement of feed leaves, which is an important input of eri cocoon production. The root cause of the shortage of feeds or lesser growth of area under plantation is the pressure of population on wasteland for crop cultivation, recurring floods, erosion of river, etc.

5. Financial Problem: Finance is the main pre-requisite of every productive operation. The success of this sector depends on the availability of finance. The rearers of sericulture have to depend on their own source of finance and many of them do not have adequate financial strength. Negligible amount of government grant was available only to the few selected rearers. Apart from this most of the rearers are poor; they cannot undertake large scale rearing on commercial basis.

6. Marketing Problem: Till now market for sericulture has been a buyers’ market. The middlemen traders purchase the silk from the rearers moving from door to door. There is no organized market for the transaction of silk. Therefore, the rearers have to sell their products to the traders at the price offered by them.

7. Lack of Fixed Capital: In sericulture sector in Assam, paucity of fixed capital seems to be major problem among the rearers of silk. Fixed capital consists of plantation ground, rearing house, and plantation equipments, rearing and grain-age equipments (like microscope, ant locks, etc). The fixed capital represents the assets bought for long term or permanent use.

Policy Implications

There is substantial scope for the expansion of sericulture in Assam. There is a scope to further increasing of earning through increasing activities due to the existence of both external and internal economies of scale. This would help increase in employment and income of those poor households who have been suffering from chronic unemployment and sustenance. Deficiency of eri food plants is one of the important limitations for the growth of sericulture in Assam. The rearers can be encouraged to cultivate feed plants as it is observed that even if castor is cultivated scientifically, there is still sufficient profit in this culture. Moreover, the government may establish more Eri Concentration Centers (ECCs) and expand the existing Eri Concentration Centers (ECCs) in collaboration with the department of social forestry and encourage private entrepreneurs to establish sericulture farm. At the same time, indiscriminate cutting down of naturally grown silkworms’ feed plants should be prevented by strictly enforcing the existing law. Moreover, to meet the shortage of silkworms’ feed plants and to increase production of cocoons, the state government may acquire wasteland and allot the same to the local silk rearing cooperatives, self-help groups (if any) or diligent rearers for the growth of silk production. Extensive plantation of secondary feed plant like borkesshu, tapioca, etc can also be encouraged to meet the deficiency of feed leaves for eri silkworms during the crisis of castor. Apart from that, produced seeds of castor can be used for the production of highly expensive castor oil, which will definitely raise the income of the
rearers. Though marketing of silk is found to be an important problem to the rearers, if the proposed spun mill in Assam is materialized, it will surely raise the demand for silk and help them to have remunerative price for their product in near future. Along with the use of modern spinning devices like CSTRI, pedal cum motor operated machine should be made popular among the spinners. Necessary training and financial aid along with provision of electricity at a low tariff should be given to the spinners. No industry can prosper unless it is backed by research and extension services. Therefore, research and extension services of sericulture should be expanded. The wide gap between the research institutions and rearers should be reduced and laboratory results should be brought to the rearers. Moreover, to eliminate the role of middleman traders who exploit the rearers by offering a low price for silk, block and district level co-operatives, self-help groups should be formed. This process will raise the bargaining strength of the rearers cum weavers and help them to have respectable price. It is observed that numbers of rearers in Sibsagarh district have formed self-help group and have been able to get higher price. Government marketing agencies like ARTFED, Assam Government Marketing Corporation limited (AGMC), North-Eastern Handicrafts and Handloom Development Corporation Limited (NEHHDC), Assam Khadi and Village Industries Board (AKVIB), etc. should be re-activated. Finally, co-operation of various sections like commercial bank, state governments, etc. is necessary for the successful growth of the sector. At last, the information gap between the government and the rearers, as regards to the sources of finance, availability of modern technology, market, etc. should be bridged by a network of publications, radio, television, public meeting, etc. This will in turn, help emergence of entrepreneurs from the new generation.

Conclusion

There is a good prospect for the development of sericulture activities in Assam that may provide larger scope for the generation of employment and income in the rural areas and also thereby help alleviating poverty. For the adequate progress of it necessary arrangements are to be made for the removal of the problems faced by this sector. Steps taken by the government so far are not found to be much productive and there is also the lack of persistent cooperation. Finally, co-operation of various sections like officers, artisans, traders, rearers, etc. engaged in activities related to sericulture is necessary for the successful growth of the sector.
References