

Sericulture ensure the livelihood security of rural and tribal peoples

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Introduction

China, Japan, South Korea and many other countries have been practicing sericulture since long. Due to the involvement of Japan in many other fields especially industries and electronics, she has now withdrawn a little from the field of sericulture where as India has accelerated the silk production in recent years. India has been doing sericulture for many centuries and the Indian silk has been popular among rulers and the masses. Immediately after independence the Govt. of India paid attention to the industry and the Central Silk Board was created in 1948 by an act to cater to the needs of overall development of sericulture in the country.

The reduction of rural poverty continues to be a paramount goal of the developing countries like India as the majority of the poor population still resides in the countryside. An estimate of World Bank, more than 70 % of the world's poor live in rural and tribal areas. So far, various strategies have been pursued to address this concern and among the major ones is rural and tribal employment creation. The agriculture sector, however, has been contending with a number of factors that have limited its potential for generating new jobs in rural areas. Those factors may include the small land holding size, insufficient capital and investment incentives, the inadequate farm infrastructure, limited market and stagnant prices of agricultural products. It is therefore necessary to focus on a broader spectrum of the rural economy. The establishment of rural based industries like sericulture, in particular, can be very effective in creating new job opportunities and providing supplemental income. Being a rural agro-based labour intensive industry this sector can also play vibrant role in checking

migration from rural to urban areas. The current article highlights the Sericulture ensure the livelihood security of rural and tribal people along with their constraints.

Sericulture is both an art and science of raising silkworms for silk production. Silk as a weavable fiber was first discovered by the Chinese empress Xi Ling Shi during 2,640 B.C. In India, sericulture is not only a tradition but also a living culture. It is a farm-based, labour intensive and commercially attractive economic activity falling under the cottage and small-scale sector. Sericulture provides employment to 55 lakh rural and tribal peoples of india, most of them small and marginal farmers or tiny and household industry. Sericulture provides income and employment to the rural poor farmers with small land-holdings and weaker sections of the society (Table 1) and tribal peoples. Being a rural based industry, the production and weaving of silk are largely carried out by relatively poor sections of the society and this aspect of sericulture has made it popular and sustainable in countries like China and India.

Table 1: Cost: Benefit analysis of mulberry sericulture and other competing crops

Item	Turmeric	Sugarcane	Mulberry sericulture
Total input costs	29,610	30,575	48,659
Gross returns	55,317	60,200	96,132
Net returns	25,707	29,625	47,476
CB ratio	1:1.02	1:1.97	1:1.98
Crop period	4 – 5 months	1 year	1 year

Source: Dandin et al., presented at the 20th Conference of the International Sericulture Commission, Bangalore, December, 2005

Share of Sericulture in national economy: In India, over six million families around 59,000 villages across the country, sericulture related activities ensure the livelihood security. The sericulture sector is also a valuable foreign exchange earner for the country. The export earnings stood at Rs. 3,338 crores during 2006-07 and 3200 crores during 2007-08. It is



estimated that India needs 25,000 MT of raw silk per year to meet its domestic requirement. The growing demand of silk in the domestic market can make the industry a valuable enterprise which in turn can provide employment for the rural masses ensuring assured economic returns at the individual family level. Currently, the domestic demand for silk, considering all varieties, is nearly 25,000 MTs, of which only around 18,475 MTs (2006-07) is getting produced in the country and the rest being imported mainly from China. Indian domestic silk market has over the years been basically driven by multivoltine mulberry silk.

Sericulture and rural development: Sericulture being a farm-based enterprise is highly suited for both large and small land holdings, with low capital investment. The very nature of this industry with its rural based on-farm and off-farm activities and enormous employment generation potential has attracted the attention of many planners and policy makers to recognize the industry as one of the most appropriate avenues for socio-economic development of a largely agrarian economy like ours. Generally, silk goods are purchased by the urban rich and middle-class consumers and it is estimated that around 57 % of the final value of silk fabrics flows back to the primary producers in rural areas. Sericulture can also play a very vital role in alleviating rural poverty due to its high work participation rate and thereby can check migration from rural to urban areas. Sericulture increases the employment opportunity of women in silkworm rearing sector in rural and tribal areas. The post cocoon activities of silk reeling and silk weaving also promise a great deal of employment for women in rural and tribal areas (Parthasarathy, 1994). Sericulture is a farm based enterprises is highly suited both for rural and tribal peoples with large and small holdings with low capital investment.

Role of Sericulture in employment generation: The percentage of population below the poverty line ranges from 47.15 % in Orissa to 12.72 % in Kerala. In major silk producing states it is about 30 % on an average (Table 2). Raw silk production is the most appropriate tool to provide gainful employment to these poorer sections of the society, as net incomes range from Rs. 12,000 to 70, 000 per annum depending upon the variety of the silk to be produced and the unit area (under host plants). It is estimated that sericulture can generate employment @ 11 man-days per kg of mulberry raw silk production (in on-farm and off-farm activities) throughout the year.

Table: State-wise status of below-poverty-line families (1999-2000)

State	% population below poverty line	State	% population below poverty line
Kerala	12.72	West Bengal	27.02
Gujarat	14.07	Uttar Pradesh	31.15
Andhra Pradesh	15.77	Assam	36.09
Karnataka	20.04	Madhya Pradesh	37.43
Tamil Nadu	21.12	Bihar	42.60
Maharashtra	25.02	Orissa	47.15

Source: Planning Commission Report, Article: K. Venkatasubramanian

Economics:

In India, sericulture is not only a tradition but also a living culture. It is a farm-based, labour intensive and commercially attractive economic activity falling under the cottage and small-scale sector. It particularly suits rural-based farmers, entrepreneurs and artisans, as it requires low investment but, with potential for relatively higher returns. It provides income and employment to the rural poor especially farmers with small land-holdings and the marginalized and weaker sections of the society. Several socio-economic studies have affirmed that the benefit-cost ratio in sericulture is highest among comparable agricultural crops.

Sericulture as higher remuneration: Sericulture is as a remunerative crop can suit all categories of farmers i.e. small,/marginal and large farmers. With short gestation periods, the returns are quick. The net returns in case of mulberry sericulture (when a farmer has one acre of mulberry plantation using family labor), is estimated at about Rs. 48,000 per annum. Mulberry is highly amenable to inter-cropping. Economics of mulberry with inter-cropping of vegetable for 3,700 sq. meters is given in Table3.

Table 3: Economics of mulberry as an inter-crop with vegetables

Crop combination	Additional income (Rs.)
Mulberry + Palak	17422
Mulberry + Methi	6026
Mulberry + Raddish	3869
Mulberry + Beans	4953

Source: CSR&TI, CSB, Mysore

Critical issues and problems encountered towards development of sericulture in country

The issues identified for development of sericulture in India are as under:

- Communization of departmental farms.
- Formation of self help groups.
- Organized and planned development of sericulture on farmer's field.
- Deployment of departmental staff in sericulture extension work.
- Emphasis on quality production.
- Stress on productivity and production improvement.
- Large scale and active participation/involvement of women and NGOS in extension and production process.
- Training and skill up gradation of departmental staff.
- Implementation of catalytic development schemes prepared by central silk board govt. of India for development of sericulture and other centrally sponsored schemes.
- Raising of mulberry nurseries and selling of saplings.
- Modernization of cocoon markets.

Problems Encountered

1. Falling international prices and heavy dumping from China at lower price.
2. Unpredictability of China's silk policies.

3. Lack of sound infrastructure towards providing adequate training to trainers & exposure of farmers to latest techniques.
4. Lack of Season specific and region specific silkworm races.
5. Lack of appropriate chawkie gardens.
6. Shortage of rearing houses at farmer's level.
7. Lack of bivoltine silkworm races suitable for sub-optimal conditions as it is not possible to create optimal conditions at farmer's level.
8. Lack of Reeling and weaving infrastructure & its training facilities to be developed at village level.



Conclusion:

Sericulture is based on agricultural output viz., cocoons and cottage based labour intensive in nature. The industry comprises of reeling, silk preparatory and weaving, silk knitting, silk wet and processing consisting of degumming, dyeing, printing and finishing besides garment manufacturing. These activities in turn support the ancillary enterprises of marketing, manufacture and by-products. While the relatively high profitability of sericulture compared to the sugarcane and turmeric, its potential in generating additional employment, etc. are widely acknowledged. It is also necessary to highlight the enormous promises that sericulture holds for poverty development of rural and tribal peoples. The efforts of Central Silk Board to promote all the facets of sericulture industry from soil to silk has borne result as evidenced by increased raw silk productivity from around 50 kg to 83 kg/ha by bringing



down area of mulberry cultivation from over 3.00 lakh to 1.75 ha. Still lot of work has to be done in improving production and productivity so as to emerge as top silk producing country in the world map of silk production.

