



E-ISSN: 2320-7078

P-ISSN: 2349-6800

JEZS 2019; 7(6): 1100-1103

© 2019 JEZS

Received: 16-09-2019

Accepted: 20-10-2019

Suraksha Chanotra

Division of Sericulture,
SKUAST-Jammu, Chatha,
Jammu, Jammu and
Kashmir, India

Kamlesh Bali

Division of Sericulture,
SKUAST-Jammu, Chatha,
Jammu, Jammu and
Kashmir, India

RK Bali

Division of Sericulture,
SKUAST-Jammu, Chatha,
Jammu, Jammu and
Kashmir, India

Corresponding Author:**Suraksha Chanotra**

Division of Sericulture,
SKUAST-Jammu, Chatha,
Jammu, Jammu and
Kashmir, India

Sericulture: An opportunity for the upliftment of rural livelihood

Suraksha Chanotra, Kamlesh Bali and RK Bali

Abstract

Livelihood generation is one of the major potentials of sericulture and silk industry. Sericulture has emerged as the most important cash crop with minimum investment, low gestation period, high employment potential and highly remunerative return. It is well suited to the agrarian economy of the rural people. Sericulture is suitable for every section of society including a big farmer or a landless aged person irrespective of man or a woman. Involves simple technology, which is easy to understand and adopt. Sericulture has provided downstream employment and income generation in rural and semi-urban areas, high participation for low-income and socially under privileged groups. In this review an attempt has been made to investigate that how sericulture fulfill the opportunities of livelihood for rural people and concluded with some suggestions to improve the long term feasibility of sericulture.

Keywords: Sericulture, upliftment, employment, rural livelihood, income

Introduction

In India, agriculture and agro-based industries play a vital role in the improvement of the rural economy. Limited availability of land, limited cash returns and agriculture being confined to one or two seasons in the year have made villages to look for supporting rural industries such as sericulture (Rai, 2006) [8]. Sericulture broadly comprises inter-linked activities such as food plant cultivation, maintenance to feed the silkworms, silkworm rearing to produce the silk cocoons, reeling the cocoons for unwinding the silk filament, yarn making, weaving and processing of fabric (Ahmed and Rajan, 2011) [2]. Sericulture consists of three distinct categories of activities:

1. Cultivation & Maintenance of Silk worm Host Plant.
2. Rearing of silk worm for production of cocoons
3. Extraction of silk yarn from cocoons i.e. Silk Reeling and other Post Cocoon activities like spinning, twisting, weaving, processing, printing etc.

Asia is the top producer of silk in the world contributing 95% of the total global output. There are 58 countries on the world map of silk; bulk of it is produced in China and India, followed by Japan, Brazil and Korea (Nagaraju, 2008) [7]. Sericulture in India is a fairly organized activity and is largely rural based and labor intensive. Cultivation is spread over 22 States, covering 172000 hect. Across 54000 villages operating 258000 handlooms and 29340 power looms (Dewangan *et al.*, 2011a) [3]. Sericulture play very effective role in the utilization of the natural resources in a most effective manner for socio-economic upliftment with livelihood, employment and income generation (Malik *et al.*, 2008) [6]. Sericulture is a potential sector of the agriculture to raise economic status of the farming community and also earning foreign revenue (Thapa and Shrestha, 1999) [14]. Sericulture is an integral part of rural life, practiced by about 1.5 lakh rural farmers in the states of Jharkhand, Chhattisgarh, Orissa, Madhya Pradesh, Utter Pradesh, West Bengal, Bihar, Maharashtra and Andhra Pradesh (Shetty *et al.*, 2007) [11]. Silk industry has lot of socio-cultural and traditional linkages in India and plays a vital role on rural economy and hence, the aboriginals are practicing sericulture simultaneously with agriculture for base livelihood (Thangavelu, 2002; Mahapatra, 2009) [13, 5].

Sericulture in India

India is the only country in the world which produces all the four varieties of silk namely Mulberry, Eri, Tasar and Muga. Mulberry is the largest practiced sericulture industry in India. Mulberry silk production contributes almost 75 percent for entire silk production in the country. India has second highest silk producer of raw silk and consumer of pure of silk. In

India, silk production has improved manifold in recent years. Sericulture provides livelihood to large section of the rural and semi-urban population i.e. for the people engaged in pre-cocoon to post-cocoon sectors of sericulture industry. In recent years the Sericulture is opted by many farmers as a cash crop in the agriculture sector and it is a boon to the farmers to change their socio economic status. India continues to be the second largest producer of silk in the world. India has the unique distinction of being the only country producing

all the five kinds of silk namely Mulberry, Eri, Muga, Tropical Tasar and Temperate Tasar. Sericulture is an important labour-intensive and agro-based cottage industry, providing gainful occupation to around 7.25 million persons in rural and semi-urban areas in India. Out of these, a sizeable number of workers belong to the economically weaker sections of society. There is substantial involvement of women in this industry (Upadhyay & Barman, 2013) [1].

Table 1: Silk production and employment generation in India for the period 2010-2015

Year	Raw Silk production		Total Raw Silk Production (MT)	Cumulative Employment generation (Lakh persons)
	Mulberry	Vanya		
2010-11	16,360	4,050	20,410	72.50
2011-12	18,272	4,788	23,060	75.60
2012-13	18,715	4,964	23,769	76.53
2013-14	19,476	7,004	26,480	78.50
2014-15	21,272	7,195	28,467	80.30

Source: The data resource from central silk board, Bangalore (Central office.)

India is the Second largest producer of silk in the World. Among the four varieties of silk produced, in 2014-15, Mulberry accounts for 74.73% (21,272 MT), Tasar 8.44 % (2,404 MT), Eri 16.27% (4,633 MT) and Muga 0.55% (158 MT) of the total raw silk production of 26,467 MTs. The employment generation in the country is raised to 8.03 million persons in 2014-15 compared to 7.85 million persons in 2013-14, indicating a growth of 2.29%. State-wise production of raw silk in India during 2012-13, 2013-14 & 2014-15 are given below.

It provides livelihood to large section of the rural and semi-urban population i.e., mulberry cultivator, co-operative rearers, silkworm seed producer, farmer-cum-rearer, reeler, twistor, weaver, hand spinners of silk waste, traders etc. Sericulture is a cash crop in the agriculture sector; it gives returns within 30 days. Hence, this helps to rural people for the socio-economic development, women empowerment, increase children's education, social activities developments through sericulture activities in India.

Table 2: In India, state wise raw silk production during the XII plan period (2012 to 2015) in MTs.

Sr. No.	State	Achievements		
		2012-13	2013-14	2014-15
1	Karnataka	8219	8574	9645
2	Andhra Pradesh	6550	6912	6485
3	Telangana	--	--	100
4	Tamil Nadu	1185	1120	1602
5	Kerala	6	4	7
6	Maharashtra	97	122	222
7	Uttar Pradesh	157	188	236
8	Madhya Pradesh	190	195	177
9	Chhattisgarh	391	391	200
10	West Bengal	2070	2079	2500
11	Bihar	22	52	53
12	Jharkhand	1090	2003	1946
13	Orissa	104	53	98
14	Jammu & Kashmir	145	136	147
15	Himachal Pradesh	23	25	30
16	Uttarakhand	17	22	29
17	Haryana	0.13	0.13	0.3
18	Punjab	5	4	4
19	Assam & Bodoland	2068	2766	3222
20	Arunachal Pradesh	22	15	28
21	Manipur	418	487	369
22	Meghalaya	517	644	655
23	Mizoram	40	44	50
24	Nagaland	324	606	619
25	Sikkim	3	0.20	8
26	Tripura	15	40	36
Total		23,679	26,480	28,467

Sericulture is an important labour intensive sector in the world and Indian economy combining both agriculture and

Table 3: This table information that employment generation of India

Years	Employment
2007-08	6.12
2008-09	6.31
2009-10	6.82
2010-11	7.25
2011-12	7.56
2012-13	7.09
2013-14	8.22

Source: International Sericulture Commission 2014.

This table information that employment generation of India created more employment generation in sericulture. On the whole high employment generation of India sericulture in recent years 2013-14 is about 8.22 percent is a positive relationship.

Sericulture sector provides employment opportunities about 10.67 lakh rural, semi-urban people and 1 hectare of mulberry cultivation provides year long continuous employment in the state. They cater to the demand of parental seed cocoons required for the production of cross breed and bivoltine hybrid layings. Sericulture is mainly spread over in the southern part of Karnataka, due to this fast modernizing happens like-urbanization, industrialization, and fill the gap of scarcity of agriculture labour.

Distributions of respondents according to their land holding

Sericulture being a farm based enterprise is highly suited both for large and small land holdings, with low capital investment. Largely the silk goods are purchased by the urban rich and middle class consumers which are estimated around 57% of the final value of the silk fabric in the rural areas (Gangopadhyay, 2009) [4].

Table 4: The data presented in the table inferred that majority of 61.66 per cent respondents

1	Categories	Frequency	Percentage
2	Landless	42	35.00
3	Marginal (<1 hac)	74	61.66
4	Small (1-2hac)	4	03.33
5	Medium (2-4 hac)	-	-
6	Large (>4 hac)	-	-

The data presented in the table inferred that majority of 61.66 per cent respondents were marginal farmers having land holding less than one hectare followed by landless category (35 %). Only 3.33 per cent belonged to small farmer with land holding of 1-2 hectares of land. The reason may be that this enterprise requires less land as well as the respondents were poor and they adopted this enterprise just to meet their livelihood needs or for support to their other economic resources. None of the respondents were found in large and medium category.

Table 5: Distributions of Respondents according to House as reported by Siddappaji *et al.*, 2014.

S. No.	Categories	Frequency (N=120)	Percentage
1	Hut	12	10.00
2	Kachcha	54	45.00
3	Pucca	46	38.33
4	Mixed	8	06.66

Role of sericulture in socio-economic development of rural livelihood

Sericulture sector provide Socio-economic development activities as the following:

➤ In employment generation

Sericulture is the part of the agriculture activities in the country. It generates more employment opportunities when compare to other industry, especially in rural and semi-urban areas. Sericulture is a labor intensive industry in all its phases. It can generate employment up to 11 persons for every kg of raw silk produced. Out of which more than 6 persons are women. More than 60.00 lakh persons are employed as full time workers in the production chain out of which 35-40 lakh persons are women (Rama Lakshmi C.S. 2007) ^[9].

➤ Low gestation

Sericulture operations require very low investment for its initial establishment. Mulberry takes only 6 months to grow for commencement of silkworm rearing mulberry once planted will go on supporting silkworm rearing year after year for 15- 20 years depending on management provided. By adopting stipulated package of practice, a farmer can get up to Rs. 30000 per acre/ per annum.

➤ High returns and women empowerment

Sericulture provides tremendous opportunities to the women in the rural areas particularly in silkworm rearing and reeling activities with reference to income. 60 percent of the women employed in down- stream activities of sericulture in the country. This achievement is possible because sericulture sector starting from mulberry garden management, leaf harvesting and silkworm rearing. Women in rural India participate in a variety of economic activities.

➤ Ideal Programme for weaker sections of the society

Sericulture is an ideal programme for weaker section of the society because low gestation, higher returns. Acres of mulberry garden and silkworm rearing can avoid maximum labourers and save wages in the sericulture sector of the state. Tasar silkworm process can offer supplementary gainful employment for tribals compare to other sericulture activities.

➤ Eco- friendly activity

Sericulture sector is an eco- friendly activity because as a perennial crop with good foliage mulberry contributes to soil conservation and provides greenery. Waste from silkworm rearing can be recycled as inputs to garden. Development programmes initiated for Mulberry plantation are mainly in upland areas where un-used cultivable land is made productive.

➤ Income generation

Sericulture is an income generating agro-enterprise in the mid hill region to alleviate poverty, through increasing rural women employment and their income, and thus, has been given due priority by Agriculture Perspective Plan. Sericulture is a potential sector of the agriculture to raise economic status of the farming community and also earning foreign revenue (Thapa and Shrestha, 1999) ^[14].

Conclusion

Sericulture has emerged as the most important cash crop with minimum investment, low gestation period, high employment potential and highly remunerative return. Thus it offers livelihood generation as one of its major potentials particularly the rural people. Sericulture is suitable for every section of society including a big farmer or a landless aged person irrespective of man or a woman. It involves simple technology, which is easy to understand and adopt. Thus, Sericulture has provided downstream employment and income generation in rural and semi-urban areas, high participation for low-income and socially under privileged groups.

References

1. Upadhyay AP, Barman U. Identification of Problems and Formulation of Extension Strategies for Upliftment of Women Agripreneurship in Sericulture: An Exploratory Study in Garo Hills of Meghalaya. *Journal of Academia and Industrial Research*. 2013; 2(6):369-373.
2. Ahmed SA, Rajan RK. Exploration of Vanya silk biodiversity in north eastern region of India: Sustainable livelihood and poverty alleviation. *Proceedings of the International Conference on Management, Economics and Social Sciences, (MESS' 11), Bangkok, 2011, 485-489.*
3. Dewangan SK, Sahu KR, Achari KV. Sericulture: A tool of eco-system checking through tribal. *J Environ. Res. Dev.*, 2011a; 6:165-173.
4. Gangopadhyay D. Sericulture Industry in India – A Review, NISTDS, CSIR, New Delhi, 2009.
5. Mahapatra HC. Tropical tasar biodiversity and forestry. *Proceedings of the National workshop on Seri-Biodiversity Conservation, March 7-8. CSGRC, CSB, Hosur, India, 2009, 163-167.*
6. Malik MS *et al.* Socio-economic upliftment of tribal

- communities in Jharkhand through agroforestry based farming system, 2008.
7. Nagaraju J. Silk of India, grace and luster. *Biotechnol. News*. 2008; 3:4-7.
 8. Rai S. Tasar sericulture, an emerging discipline for conservation and sustainable utilization of natural resources. *The Vision Review Point*, 2006.
 9. Rama Lakshmi CS. - Potential for participation of women in Sericulture sector, March, 2007.
 10. Reports of Central Silk Board, Bangalore (Central office.). 2010-2015.
 11. Shetty KK *et al.* Vanya silks of India-Exploring New Horizons, 2007.
 12. Siddappaji D, Latha CM, Ashoka SR, Dr. Basava Raj MG. Socio- economic Development through Sericulture in Karnataka. *IOSR Journal of Humanities And Social Science*. 2014; 19(10):24-26.
 13. Thangavelu K. Future research strategy for non-mulberry sericulture with particular reference to tasar culture: Advances in Indian sericulture research. *Proceedings of the National Conference on Strategies for Sericulture Research and Development*. Nov. 16-18, CSRTI, CSB, Mysore, India, 2002, 365-368.
 14. Thapa RB, Shrestha KB. Silkworm rearing technology. Paper presented on the workshop at Bhaktapur, Nepal. 1999.