

Sericulture for Employment Generation among the Tribal- A Study of Two Tribes Block of Raigarh Dist. [C.G.] India

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Abstract—Among many agro- based cottage industries in India sericulture has been promoted as an agro-based, labor intensive, rural oriented cottage industry, providing gainful employment mainly to the weaker and marginalized section of the society specially tribal. Sericulture occupies the place of pride in the rural economy can be practiced even with very low land holding, low gestation, high returns make sericulture an ideal program, requiring little capital investment. In 2010-2011 the employment in sericulture sector was 72.5 lakh persons. The involvement of landless rural people in tasar sericulture is because they understood its potential for rural and tribal upliftment. This article demonstrates that certain developmental initiatives have been playing an important role in the socio-economic progress of tribal masses in Raigarh district and explains the increased returns from sericulture as a result of development programs. The study concludes with some suggestions to improve the long term feasibility of sericulture.

Keywords—Development, Employment, Income, Sericulture, Tribal, Tasar,

I. INTRODUCTION

THE word "Sericulture" has been derived from the word "Su" [Si] which means silk. Sericulture, the art and science of growing silkworm, food plants, rearing silkworms and production of silk is basically an agro-industry, divided into farm and industry sector [1]. There are 10 million silkworm rearers and 0.5 million related industrial workers in the world [2]. Asia is the top producer of silk in the world contributing 95% of the total global output. There are 40 countries on the world map of silk; bulk of it is produced in China and India, followed by Japan, Brazil and Korea [3]. Sericulture play very effective role in the utilization of the natural resources in a most effective manner for socio-economic upliftment with livelihood and employment and income generation [4]. 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 [5]. 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 [6]. Sericulture is a potential sector of the agriculture to raise economic status of the farming community and also earning foreign revenue [7]. Sericulture in India is a fairly organized cottage industry, largely rural based and labor intensive. Cultivation is spread over 22 states, covering 172000 hectares. Sericulture provides employment to more than 6 million people across 54000 villages, which operate 258000 handlooms and 29340 Power looms, producing 5 million square meters of silk fabric per annum [8]. Silk constitutes world's 3% textile trade and India's share in the world's silk trade is about 9% and which is growing in recent years. Globally India is the second largest producer of silk and contributes about 15.5% to the total world raw silk production [9]. Sericulture is an integral part of tribal life, practiced by about 1.5 lakh tribal populace in the states of Jharkhand, Chhattisgarh, Orissa, Madhya Pradesh, Uttar Pradesh, West Bengal, Bihar, Maharashtra and Andhra Pradesh [10]. There are 258 well-recognized tribal communities, notified as scheduled tribes in India [11]. This culture is able to generate quite remunerative and meaningful employment [12], [13]. Tasar sericulture is a labor intensive industry in all its phase. It can generate employment up to 11 persons for every kg. of raw silk produced [14]. Tropical tasar sericulture is the rearing of wild silkworms *A. mylitta* D. for production of tasar silk and it provides livelihood to rural tribal's in India [15].

In Chhattisgarh Tropical Tasar and mulberry are reared on commercial scale [16]. Tasar is really named as Kosa. Sericulture is being practiced by the tribal of traditional Districts of Bastar, Raigarh, Bilaspur and Surguja [17]. Sericulture activities covered 43760 acres. The total number of Tasar center is 285 and mulberry gardens are 117. The total beneficiaries are 51310 in numbers out of them 32429 are Scheduled Tribe [18]. The polyphagous nature of the tasar silkworm is a boon to its rural tribal rearers as their livelihood linked with the collection and sale of nature grown wild tasar cocoons [19]-[21]. Tasar sericulture is a cottage, agro-forestry and forestry based industry that provides sustainable livelihood to several rural communities in the country to earn foreign exchange [22]. 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 tasar

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sericulture simultaneously with agriculture for base livelihood [23], [24]. Tasar sericulture is an important co-discipline of applied forest biology, addressing towards breeding prospective to promote the sustainable utilization of this precious natural resource [25].

II. METHODOLOGY

The present investigation was carried out in 2 Blocks namely Dharamjaigarh and Kharasia of Raigarh district, Chhattisgarh state, based on potentiality and production of tasar/mulberry cocoons, where both types of sericulture – mulberry and tasar are being practiced. Raigarh district is major tasar growing area where tribal are engaged in sericulture activity. Tasar silkworm rearing has been going on since 1956-57 and rearing of mulberry silkworm started in the year 1982-83. Sericulture activity covered 312042 acres; with 5739 beneficiaries out of them 3347 are scheduled tribe. Dharamjaigarh and Kharasia are rural populous blocks. The total geographical area of these two blocks is 2480.41, square kilometers and population is 179748, 129157, out of which schedule tribe is 118637 and 38098 [66% and 29.49%] respectively. Sex ratio is 1003 and 1003 and population density is 117 and 136 per Sqkm.

Initially the list of Seri cultural villages and the names of beneficiaries were obtained from local Sericulture department of above 2 Blocks, The primary data was collected from the sampled respondents following the personal interview method using structured interview schedule standardized by Nagaraja [1989]. In the above mention blocks four villages were selected with 25 beneficiaries in each village at random for collection of data. Thus, 100 beneficiaries were selected from each block. The farmers were post classified into main and additional based on the engagement of employment.

The information sought from the respondents/beneficiaries consisted of three types. The **first type** pertained to general information. The **second type** sought was related to Occupational Status, Employment days in a year, Total Monthly Income, Occupation before the Sericulture, Duration of Sericulture Work, Average Annual Income from the Old Occupation, Crops taken in a year, Cocoon produced in each crop, Profit from each crop. The **third type** of information pertained to the Losses in Sericulture, Compensation by Government, Loan according to requirement, Traditional Business is affected or not, Total labor period, Change in economic status, Change in Annual Income through Sericulture, Displacement by Sericulture, Impact of Sericulture in Life Style and economics of silk production.

Primary and secondary data was analyzed using various statistical tools viz., mean, mode and median where the situation are the basis of vertically received.

III. RESULT AND DISCUSSION

On the basis of study, the analysis pertaining to employment, income, occupation, risks factor and social impact. In Dharamjaigarh & Kharasia blocks analysis of the first type of information related that the Kachha houses are

100%. On the other hand Pakka house are nil. Regarding ownership of house in Dharamjaigarh & Kharasia all the respondents have their own house.

It is in observation that in Dharamjaigarh block the number of working members in 8 families only 1 and the same way in 51 families 2, in 23 families 3, in 15 families 4 and in 3 families 5 members are working. where as in kharasia block the number of working members in 60 families 2, in 19 families 3, in 16 families 4, and in 5 families 5 members are working.

It is clear through the analysis that 3 members are involved in the occupation from the average families. It means there is a positive attitude of the members from each family. Sericulture was adopted as Secondary occupation by 100% beneficiaries from Dharamjaigar and 99% from Kharasia block.

A. Employment Days from Sericulture

In Dharamjaigarh block 26% respondents received employment for 100-150 days and 74% received 151-200 days. In Kharasia 37% respondents received employment for 100-150 days and 42% received 151-200 days. 201-300 days' employment received by 16% and 301-365 days employment receiver's respondents are 5%.

B. Income from Sericulture

The data indicate that total average monthly income in Dharamjaigarh is only Rs. 3770/- and in Kharasia Rs. 3660/- at their village itself. Whereas from the forest minor produce collection and disposal [once in a year] the average income of the respondents has been estimated for Dharamjaigarh Rs. 5350/-, and Kharasia it is Rs. 5750/-. The average years of sericulture occupation in Dharamjaigarh is 12.25 and in Kharasia 9.80 year. The economic status from the old occupation is normal for 156 and bad for 42 and very poor for 2 respondents.

It is observed that 35 respondents take only 1 crop in a year whereas 34 take 2 crops and 131 take 3 crops. DFLs were supplied from Sericulture centers and their demand of dfls was easily fulfilled by the State sericulture department. Out of 200 samples 91 from Dharamjaigarh and 97 from Kharasia block rear on *Terminelia arjuna*. 172 respondents stated that host plants are affected by Matamari [leaf gall infection] and 158 respondents replied that plants are affected by stem borer where as 29 for leaf spot and 04 for Root rot.

C. Cocoon Production and Profit

The numbers of cocoon produced are 6300/crop/beneficiaries in Dharamjaigarh and in Kharasia it is 7800. The economic gain by the respondent of Dharamjaigarh is Rs.5160/-and in Kharasia it is Rs.5960/-. The yearly production of cocoons by the respondent of Dharamjaigarh is 18900 nos. and in Kharasia 20550 number. Average annual income is about Rs 16980/- for Dharamjaigarh and Rs 16140/- for Kharasia.

D. Sericulture and Risk Factor

196 respondents had been bore a loss from Sericulture and 04 had not suffered. It indicates the hardship and risk involved

in it. Almost all attributed the loss to fluctuation of atmospheric and adverse weather conditions viz heavy rains, high humidity and high temperature cause disease which leads to a complete failure of their crops. Out of 200 respondents only 2% get **compensation** from government where as 98% denied. All respondents are accorded full cooperation by the officers of sericulture department. Only 1 respondent get loan as per their requirement and 189 not get.

E. Sericulture and Social Impact

It is observed that all the respondents attributed the following impact by Sericulture –Conservation of environment, No cutting and felling of trees, Interstate migration is checked, Local employment is generated. It served as additional income generating source, Regular savings habit has been developed, **want to attach continue** with the sericulture. It is suited to our lifestyle. The work is simple and can be done without any cost. Can serve better for the additional income generation and pave the way for the local employment generation. The total labor period has been estimated In Dharamjaigarh 7.68 hrs and in Kharasia 7.40 hrs. All the respondents [100%] agreed that their economic status has changed. It has been estimated that the annual income rose up to an average of Rs 20200/- respondent in Dharamjaigarh and in Kharasia block Rs. 18850/- 17 respondents have been displaced or migrated and 183 respondents denied for any migration.

IV. CONCLUSION

This Tasar silk sector is not only important for generating rural employment and preventing rural migration but also for role in protection and preservation of ecology, heritage and socio-cultural values.

Sericulture provides more than 50% employment to the respondent in a year thus stops the inter-state migration. According to the MNREGA [Mahatma Gandhi National Rural Employment Guaranty Act] population must receive 100 days employment in a year where as sericulture provides 151-200 days employment i.e., 64%. Due to these practices respondents earned around double income compared to their earlier income. It is noteworthy that adopting the Sericulture by tribal they conserve the environment by non-cutting and felling of trees because sericulture is now their way of life. Interstate migration is checked because sericulture provides additional income at their door level. Regular savings habit has been developed by sericulture practices among the tribes because they earn much more than their standard of living. It is remarkable that sericulture is suited the life style of tribe because practice of sericulture is simple and can be done without any cost and skill. The advantage of tasar sericulture is that the practice can be adopted by the farmers without any difficulties and within shortest possible time. It can engage members of the whole family and the work can be managed in addition to their day to day activities. Initiating sericulture by a farmer invariably leads is generation of further downstream employment in reeling and weaving either in house hold or organized sectors.

V.SUGGESTION

1. The government should give them compensations for the losses incurred in this occupation due to diseases and the negative impact of natural factors.
2. There should be enough loan facilities for the improvement of their occupation which is still more beneficial.
3. The government should be encouraging them to make clothes along with sericulture occupation.

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