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Women and the Indian Sericulture Industry

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A B S T R A C T

For the development of any nation, the females play a significant role. In India, the females comprise 48.18% of the total population. The majority of Indian females reside in the rural areas of our country. The female population of the rural India is the backbone of the rural economy and major drivers in the agriculture sector. They play an important role in poultry farming, goat farming, apiculture and sericulture. The traits required for the workers in the agriculture sectors are inherent in the Indian female population. The qualities of hardwork, concentration, courage, devotion and dedication are ingrained in the women folk of India. Therefore, the agriculture related work is easily done by women. In the sericulture sector, women form a major working force. Sericulture being one of the most important cottage industries can provide employment for the Indian women. It is a labour intensive agro industry and can provide livelihood support to the unemployed rural women. Sericulture can also be taken up as an additional source of income for the people employed in other sectors. It needs low capital investment and greater return. The management and look after is also very simple and less time consuming. It utilizes little space hence, it can provide employment not only to the agriculturists but, also to the landless people and the labourers. Sericulture is the conscious mass-scale rearing of silk producing organisms to obtain silk. It is intensively practiced in the rural areas of Jammu and Kashmir, Himachal Pradesh, Assam, West Bengal, Karnataka and Tamil Nadu; where it creates gainful employment opportunities. It improves the economic conditions of the poor and the small area farmers along with poverty alleviation. In India, women have played and continue to play a crucial role in development of agriculture and allied fields. Unfortunately, the economic condition of women in rural India is critical because they don't have proper work in their hand. It is the best occupation for women in the changing scenario of their family income. Thus, it is possible to empower women through the development of the sericulture industry. The women participate at a higher rate in activities relating to silkworm rearing, cocoon harvesting, marketing and spinning of the spun yarn. Besides, their involvement is again higher against men in marketing of pupae and cocoon. The similar trend of participation of women is seen in case of mulberry sericulture. It is possible to achieve women empowerment through sericulture industry. The lack of separate rearing house, adequate plantation, improved technological knowledge and times have been major constraint in participation of women in sericulture. As the woman contribute significantly in socio-economic development of rural sector through sericulture, they need to be financially and technologically supported. The development of the sericulture industry and the empowerment of the rural women in India are correlated.

Introduction

Globally, Asia is regarded as the main producer of silk as it produces over 95 % of the total global output. The bulk of it is produced in China, India, Japan, Brazil and Korea. India has been ranked as the second major and largest raw silk producer in the world as it contributes about 18% to the total world raw silk production, with an annual silk production of around 20,000 Metric Tons. Sericulture and Silk Textiles Industry is one of the major sub-sectors comprising the textiles sector. Sericulture is an agro-based labour intensive industry and refers to the mass-scale rearing of silk producing organisms in order to obtain silk. The production process consists of a long chain of interdependent and specialized operations. The major activities involved in a sericulture industry are:

Cultivation of silkworm food plants
Rearing of silkworms for the production of raw silk
Reeling the cocoons for unwinding the silk filament
Other post-cocoon processes such as twisting, dyeing, weaving, printing and finishing.

In India, it is a village-based industry practiced in about 53,814 villages and provides employment to about 6 million people moreover; it is capable of providing continuous income to farmers. Sericulture suits both marginal and small scale land holders because of its low investments, high assured returns, short gestation period, rich opportunities for enhancement of income and creation of family employment round the year. In India, due to favorable climatic conditions, mulberry is cultivated mainly in five states, viz., Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal and Jammu and Kashmir. These five states collectively account for 97% of the total area under mulberry cultivation and 95% of raw silk production in the country. The present global scenario clearly indicates enormous opportunities for the Indian Silk Industry. Sericulture is one of the most labor intensive sectors, combining activities of both agriculture (sericulture) and industry. It is an occupation by women and for women because women form more than 60% of the workforce and 80% of silk is consumed by them. This study in undertaken to understand the participation of women in sericulture, factors which influenced them to venture into sericulture and the problems faced by them while starting and promoting the business. Numerous studies have brought out the vital role that women have been playing in all farm-related activities—ranging from land preparation to marketing. They constitute a higher proportion of the labor force in the sericulture sector than men. However, they are generally not active in decision making in the community (Nathan and Kelkar, 1997; Rahman and Routray, 1998; Joshi, 2000; Barman, 2001; Bose *et al.*, 2009; Satyavathi, Bharadwaj and Brahmanand, 2010). However, in the present study, it has been found that women are equally involved in decision making in their households, as well as in the village. The study by Regmi and Weber (1997) has critically assessed the existing gender relations in agriculture, in the cross-cultural, historical, and contemporary perspectives. Barman (2001) argued that social and cultural constraints lead to less mobility of women and less involvement in income-earning activities in far-off places. Women are largely involved in unpaid housework and crop production and livestock rearing within their homestead areas. Sericulture, as a crop enterprise, has emerged as one of the dominant fields in the theoretical and methodological understanding in the disciplines of sociology and social anthropology in India. Thus, sociological analysis of sericulture and its emergence in

the development literature gives us an idea of the activity which would trigger further theoretical and critical studies. Here an attempt has been made to understand the sociological view of sericulture and women's role in the development of the enterprise and also the community. It has been seen that the sericulture activity brings regular income to the community without any bias of caste, creed, gender, or religion. A remarkable feature of this activity is its egalitarianism—sericulture farmers, rich and poor, earn the same income from it. As women has a crucial role in the activities of sericulture, it equally creates opportunities and make them independent socially, economically, politically and otherwise (Vasanthi, 1992; Vijayanthi, 2002; Goyal, 2007; Thomas *et al.*, 2010; Geetha and Indira, 2010; Pillai and Shanta, 2011).

Background

India, the second largest producer of silk in the world, enjoys the unique distinction of producing all the four varieties of natural silk, namely, Tasar, Eri, Muga, and Mulberry. The silk industry can be found in vastly diverse regions such as temperate (Kashmir), subtropical (Jammu, Himachal Pradesh, Uttar Pradesh, North-Eastern Region), and tropical (West Bengal, Bihar, Orissa, Madhya Pradesh, Andhra Pradesh, Tamil Nadu, and Karnataka). Mulberry silk accounts for about 90% of the total production in the country (Geetha and Indira, 2010). Sericulture is essentially a village-based industry that provides employment to both skilled and unskilled labor (Lakshmanan and Jayram, 1998). At present, it is estimated that every hectare of mulberry plants provides employment to about 16 persons. Although sericulture is considered a subsidiary occupation, technological innovation has made its cultivation possible on an intensive scale, making it capable of generating huge revenues. All family members, irrespective of gender and age, can contribute to the success of sericulture and, in this sense; it can be considered a home-based industry. Today, mulberry is being cultivated in about 0.192 million hectares in India. Around 6 million people from around 800,000 farm families are engaged in sericulture activities, concentrated mainly in the three southern states of Karnataka, Andhra Pradesh, and Tamil Nadu. In 2016-17 the mulberry Silk Production Statistics estimated the world silk production to be 192,692 metric tonnes. China's contribution to world silk production is 80% (158,400 metric tonnes), and the share of Indian silk production is 30,348 metric tons (13%). China and India together account for 93% of world silk production. According to the Annual Report of the Central Silk Board (CSB) for the year 2016-2017 the silk scenario of India Domestic demand 36,000 metric tonnes, Own production 30,348 metric tonnes, Gap in production 6000 metric tonnes, Raw silk imports 3795 metric tonnes, Silk fabric imports 3000 metric tonnes, Silk exports (worth Rs.) 2093.42 cr, Sericulture villages 52,360, Sericulture families 9,47, 631, Employment (lakh persons) 85.10. The market share of Indian silk exports in the global silk trade is 4% to 5%. In its long history, sericulture in India has experienced many ups and downs. However, during the last 30 years, India has made tremendous progress in the production of mulberry silk for which there is an increasing international demand. There is tremendous scope for the expansion of its production in the country. In recent years, considerable progress has been achieved in evolving suitable mulberry varieties and techniques to evolve new silkworm species suitable for tropical climatic conditions. With the evolution and introduction of more productive silkworm species, the productivity has increased and sericulture has become a highly remunerative activity. Attracted by these advantages, many

more farmers have taken up sericulture and the industry has spread to almost all the States in India (Balasubramanian, 1986). Karnataka has been the leading producer of mulberry silk—accounting for more than 50% of its production in the country. This state is now regarded as the "Silk Bowl of India." Andhra Pradesh comes next to Karnataka. Kasi (2000) rightly opined, "Sericulture is a labour-intensive agro-based activity" and is also an industry. It includes growing of mulberry plants, rearing of silkworms, production of cocoons, and reeling of silk-yarn. While cultivation of mulberry and rearing of silkworms are agricultural activities in character, reeling of silk, twisting, and weaving are distinctly industrial in nature. The reeling of cocoons is done in cottage establishments or in large factories, called filatures. The development experience in our country reflects the extent to which economic growth per se does not lead to improvement in the socioeconomic conditions of the people. However, at times, processes that aimed at optimum utilization of resources have led to increased marginalization of people, especially children and women, in the long run. A critical area of concern in this regard should be to rethink our development policies and agendas. These should largely reflect people's aspirations and responses to both an immediate and long-term macro-economic perspective and the social implication of these policies on their lives. Progress, if viewed from an economic and development pathway appropriate to the conditions existing in a given sociocultural milieu, will ensure a balance between economic development and improving the quality of life of the people at large. The development of sericulture industry in India is a case in point. Sericulture is said to provide an excellent opportunity for socioeconomic progress in the context of a developing country like India, due to various reasons. First and foremost, sericulture is a highly labor-intensive industry. Excluding mori-culture (mulberry cultivation), which is a cottage industry, silkworm rearing itself generates 1.5 and 4.5 person-years of employment per year per hectare of mulberry garden, under rain-fed and irrigated conditions, respectively.

Women in sericulture

Gender empowerment in rural agro-industrial sector of India has been given special thrust in Indian economy and polity since 1990s as several foreign donor agencies enabled the formation of woman-oriented NGOs. Involvement of women in working force as well as in personal and social decision making process becomes a vital issue as the development arena of globalization started excluding all the marginal sections of the society, including women. The development gap between two strata, two different gendered identities become substantially wider and all these call for an inclusive development; where the development impact can be reached to the marginal sections. Sericulture is one of such activities which open up the scope of inclusive development through promoting the marginal sections, known as 'women'. Here, most of the works are carried out by women alone, both in terms of operations performed and time invested. Thus in a way, women contribute a significant role in different spectrum of work activities as well as in decision-making. While in general perception, women's role is mostly confined in silkworm rearing, in reality it goes beyond. Leaving the shackles of gender-stereotyping, women in sericulture often take part in mulberry planting, weeding, manuring, irrigating, leaf picking, leaf transporting and storage. In silkworm rearing, they are engaged in leaf-cutting, feeding, bed cleaning, worm spacing, mounting, harvesting and disinfections. Some also participate in decision-making. Thus the dominance of

women workers in sericulture is historically evolved. However, despite showing tenacity and persistence, their efforts remained unnoticed and they continued to work as unpaid family workers. In recent years the role of women received increasing importance. The specific operations she performs as well as the magnitude of her production contribution have started being perceived and acknowledged more recently. The year 1994 had been declared as the 'Year of Women in Sericulture'. Through this special campaign, "women in sericulture" was brought on to the center stage of sericulture development. Later on, the developmental schemes conceived by Central Silk Board, India advocates greater thrust on women empowerment, promotion, awareness generation and support services (Table 1).

The concept of gender budgeting introduced by the Government of India during Tenth Plan also led the Central Silk Board of the country to assess the adequateness of the allocation of resources for women and ensure that the gender commitment coupled with budgetary commitments are translated into achievements. The Eleventh Five Year Plan made a separate "women development component" mainly to address the social security concern of women associated with the silk industry. Sericulture is an extremely labor intensive industry and occupies a pivotal position from the point of providing employment and additional income to weaker sections (Vijayanthi, 2002; Bhatta and Rao, 2003; Best and Maier, 2007; Geetha and Indira, 2011). In this context, the transformation of sericulture industry from subsistence type of operation to a modern scientific system requires the attention of all major players like policy makers, administrators, and personnel associated with the industry. Here, the word personnel mainly refers to women laborers who are the full-time workers and who look after silkworm rearing and management and whose contribution is more than that of men in this area. It has been reported that women contribute about 50% and 60% of labor to mulberry cultivation and silkworm rearing, respectively (Gate, 2001; Thamizoli, 2001; Vijayalakshmi, 2002; Singh, 2006; Panda, 2007; Goyal, 2007; Srinath, 2008; Kasi, 2011). It has been rightly observed by Inbanathan and Vijayalakshmi (1997) that from time immemorial, women have been involved in different sectors of the silk industry. According to a legend, the discovery of the silkworm and cocoon was by a beautiful Chinese princess. But for her foresight and imagination, perhaps, the silk industry would not have been what it is today. The industry is well established in the traditional countries like Japan, China, and Korea (Geetha and Indira, 2011). The progress has been equally rapid in the developed and underdeveloped countries. In India, sericulture is practiced as an agro-husbandry-based subsidiary occupation. From the household, women are employed in sericulture operations. As mentioned earlier, about 51% of women are assisting men in this lucrative industry to produce the "queen of textiles" (Kannan, 1987). Women are mostly favored because of their industrious nature. They are employed in a mulberry garden or silkworm rearing or in a grainage or in weaving or in a garment-making factory, and so on. As mentioned earlier, sericulture offers a vast scope to augment the family income. Women are actively engaged in the mulberry fields for the removal of weeds and in leaf plucking. The leaf plucking is a skilled and delicate operation. The workers must have full knowledge about which leaves to be plucked to suit different ages of silkworms. Women go to the fields in the morning for plucking the mulberry leaves and return to the rearing house before noon. In the rearing house, it is not uncommon to find women folk assisting men in feeding the silkworms.

Feeding is an art very aptly done by the fair sex, though men do chopping of leaves. Women assist in bed changing and they do this with utmost tenderness, so as not to hurt the delicate worms. Women have become experts in Chawki rearing, which is a highly delicate operation that needs to be performed with a great deal of care and patience. Good harvests depend on good Chawki rearing. When the silkworm matures and time is ripe for spinning the cocoons, it is again women who are employed for picking the ripe worms and putting them on the chandrikas (bamboo mountages on which silkworms are placed when they are just about to spin their cocoons). Any overcrowding will lead to an increase in the spinning of double cocoons, which would be unsuitable for the production of high-grade raw silk. When the cocoons are ready for harvesting, it is mostly women who sort out the flimsy, stained, double, and deformed cocoons from the chandrikas. Coming to the post cocoon technology, the involvement of women is greater, commencing from silk reeling, weaving, and garment manufacturing industry. Whether it is a charkha, cottage basin, steam filature, or automatic or semiautomatic reeling, women are preferred due to the dexterity of their fingers in getting the fine filaments from the cocoons, casting of the ends, and their patience to work in hot water and seam for long hours. It is really a touching sight to see women sitting near the boiling water all day long, reeling the crude charkha silk. Women's greater involvement in reeling industry is seen not only in India but also in all silk-producing countries. The ultimate success of the post-reeling operations depends much on good winding, that is, yarn without breaks. There should be continuity in the yarn. Otherwise there will be too many knots which hinder good weaving, be it on a handloom or a power loom. However, their work has not always been properly recognized or suitably rewarded. Cultural factors have complicated the proper evaluation of the quantum and quality of women's contribution. This includes elements such as the structure of work in each society, segregation of women and men in specific occupations, and the division of labor. Even in cases where they do both jobs, they are to be performed under the guidance or supervision of men. Their home-based jobs are not even considered as productive work and in the same vein, all home-based jobs done by women, including silkworm rearing, are relegated to a lower status and are virtually considered insignificant and unskilled. This also has a bearing on their decision-making power vis-à-vis men (Inbanathan and Vijayalakshmi, 1997; Dankleman and Davidson, 1988).

Various studies conducted in relation to women empowerment in sericulture

Female involvement in sericulture activities have been studied by several authors down the line. While some tried to estimate their productivity as whole, some analyzed the distributive impact on welfare of the family from that empowerment. Usha Rani (2007) in one of her studies showed that the establishment of one acre mulberry garden for rearing 300 dfls (disease free layings) of silk worms in two months generates 96.36 man days of employment, of which 72.70 percent are women. Not only this, she has also shown that cocoon cutting and sexing and egg incubation is exclusively done by women labour. According to one statistical analysis submitted at a National Conference on "Women in Sericulture" (held at Mysore on 16th and 17th March, 2007), it can generate employment up to 11 persons of every kg of raw silk produced, out of which more than 6 persons are women. In India, more than 60 lakh persons are employed as full time workers in the production chain out of which 35-40 lakh persons are women. Ever increasing demand to meet the domestic

handloom industry requirements; and equally increasing potentials for exports provide; tremendous opportunity for the women to avail sustainable income generating activities. Women workforce in India has never been truly recognized as substantially significant work force in any productive activity. Macro statistics of women employment always understate the number of women workers in the rural areas. But the actual fact is that without these active (but invisible) role played by the farm-women, it would have been impossible to practice sericulture in India. Moreover, the impact of female dominance in sericulture on the perspective of poverty stricken rural mass is also enormous. With the increasing rate of participation in work force, women also become a decision making agent. She can actively participate in decision-making activity without being a passive respondent. Thus the income generated by the rural women can be utilized more judiciously for the socio- economic development of the family. Moreover, in the report of the Working Group on "Empowerment of Women for XIth Plan" (2006), it was emphasized that empowerment of women has two fold benefits:

(a) Intrinsic benefit

A woman is gaining the benefit for sake of herself by joining in family workforce, other than household activity. It raises her self-dignity and self-esteem. Her purchasing power and decision making power also rises.

(b) Spillover benefit

Involvement of women workers also raises the welfare of her family members. Education level rises, nutrition level rises and thus the spillover effect helps in a holistic development of all the household members of her family. Thus the spillover benefits from women-empowerment can broadly be categorized into following major heads:

- Rise in education level of children.
- Rise in Nutrition level of family.
- Rise in Health Awareness (especially among the girl child).
- Rise in the level of social resilience power against different social crimes like dowry, domestic violence, social abuse, illegal trafficking etc.

Previous research activities indicate that economic participation of women in sericulture can augment the level of social welfare in various ways:

(i) The significant presence of women in the work force in quantitative terms – is important not only for lowering the disproportionate levels of poverty among women, but also a significant step forward raising household income and encouraging economic development of the society as a whole.

(ii) Through application of science and technology appropriate to the socio-economic condition of rural areas, rural women can be made economically self-dependent. There exists a preconceived notion that women do not want to learn new skills and techniques because they are seemed to be engaged only in primary household activities. This age-old belief acts as a bias against their inherent capability of adaptation. This notional bias itself contains some inbuilt contradiction and needs to be modified. Sericulture is such a family based occupation where the women can work along with their family responsibilities.

(iii) Empowerment of women always makes a match between economic opportunities and their capabilities. Most of the time due to lack of concern, economic opportunities are lagging behind the capabilities of women in different social sectors. Increased women's participation and earning have not only helped them to raise their self-esteem, but

also it has helped in reduction of poverty and accelerating growth. It also has a favourable impact on education and health outcomes of children.

For working women in lower income groups, it is particularly difficult to find outside labour to substitute for household based tasks, which, therefore tend to devolve upon young girls and aged women within the household or to put further pressure on the work load of the women workers themselves. According to Elson (Ghosh, 2004), it is wrong to assume that unpaid tasks of women would continue regardless of the way resources and incomes are collected. Therefore, "gender neutral" economic policies need to be formulated and stereotyping of gender division of labour needs to be changed. Sirajudeen (2011) in the study "Sericulture industry: An overview" revealed that sericulture is essentially a village based industry providing employment to a sizeable section of the population. Although sericulture is considered as a subsidiary occupation, technological innovation has made it possible to take it up on an intensive scale capable of generating adequate income. Anitha (2011) in the study "Status of Silk Industry in India" revealed that sericulture is ideally suited for improving the rural economy of the country, this sector has been identified as a sector of the Indian economy with strong potential to create jobs and contribution to foreign trade with Japanese technology and cooperation, the central silk Board has recently been able to evolve and popularize bivoltine silkworm races which can yield raw silk of international standards. With these races, provided there are simultaneous reforms in the marketing and processing of cocoons, India can hope to develop its sale of domestic raw silk beyond its own borders. Angellina (2009) in the study "Role of women in Sericulture" revealed that the role of women in sericulture is remarkable and it helps to eradicate the unemployment problem among the rural women. In developing countries like India, agriculture and agro based industries play a vital role in the improvement of rural economy. Sarala, and Aravinda (2008) in the study "Problems and Prospectus of Sericulture in Shivamogga District, Karnataka" explained Sericulture is one of the labour intensive cottage industries involving mulberry cultivation, silkworm rearing and egg production, reeling and weaving of the loom and other post cocoon processes like twisting, dyeing, painting, finishing, etc. along with the utilization of by products, offering a most promising alternative agricultural activity.

In developing countries like India, agriculture and agro based industries play a crucial role in the improvement of rural economy. The limited availability of land, the 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. In reality, Sericulture is an occupation by and for women because women form more than 60% of the workforce and 80% of silk is consumed by them. Women constitute over 60 % of those employed in down-stream activities of sericulture in the country. Sericulture can generate employment up to 11 persons for every kg of raw silk produced. Out of which more than 6 persons are women. It is worked out that about 2,575 women work days comprising about 60 percent are generated per annum out of a total of about 4,225 work days in all the activities in sericulture per hectare of irrigated mulberry.

Women empowerment: a vehicle of poverty eradication

In rural India poverty becomes a natural phenomenon due to irregular monsoon. Frequent draught results into crop failures and that, in turn, increases the debt burden of the

farmers to such an extent that even big farmers have been driven below the poverty line. Agriculture itself fails to support such a high population in our country on full time basis. In such a situation sericulture is one such activity, where women carry most of the activities alone. In drought prone areas, where there is no scope of non-agricultural employment generation, sericulture proved to be an enterprise that has the potential to eradicate poverty through creation of employment opportunity for women. Rural women work participation is always assumed as a function of poverty, landlessness and few other non-economic factors. Women belonging to landless, marginal and small agricultural families are forced to seek employment.

Thus poverty is considered to be a single most important factor of female participation. Landlessness is often synonymous with poverty and hence the line of argument is that greater poverty induces greater female participation in productive work. Hence, we can infer that higher participation in sericulture is also considered as an indicative phenomenon that poverty is acute in Indian status. We have already analyzed in the previous section that there lies a class differential among participating women in sericulture. However, the percentage of household women involvement also rises along with hired women. This confirms that sericulture not only augments welfare of impoverished section of people but it also works in gender promoting activity in rural India.

Constraints

In the study, efforts were also made to identify some major constraints related to participation of women in sericulture. Some of the major constraints documented during the study are discussed below:

Lack of separate rearing house

It was observed that majority of the farmers do not have a separate rearing house. As a result, they use to brush very less quantity of dfls (only 5-15 dfls per crop) in a corner of their living house.

Lack of adequate plantation

Although, the plantation is a primary requirement for rearing of silkworm, majority of the farmer do not have systematic plantation for rearing of silkworms. They use to collect leaves from naturally grown plants from different places nearer to their home. As a result, the farmers cannot take up the rearing in every season regularly.

Lack of improved technological knowledge

Most of the farmers are not aware of the improved rearing technologies viz, high yielding silkworm variety, disinfection, improved rearing technology, etc. This results in low production of cocoons and generates low income.

Inadequate time

In case of the women belong to very low income group; it is obligatory to engage themselves in agricultural field for certain works like transplanting of rice, weeding, harvesting, etc. Sometimes, they use to works at others agriculture fields by taking wages. As a result, this group of women cannot participate continuously in the seri culture.

Suggestion

- Research focus of women friendly technologies. Design market infrastructure to favour women's participation. Training cum study visits to women.

- Convergence approach with forest, Rural Development, Women and Child Welfare, Industries, Tribal Welfare, Marketing, Finance, Insurance sectors, Energy Departments to bring in coordinated approach and action plans to maximize the benefits in favour of beneficiaries.
- Externally aided projects integrating Water Shed Development, Agriculture Department (ATMA), Joint Forest Management, Waste Land Development, Tribal Development, Vanya Silks Projects etc.
- Promote direct linkages between rearer, reeler, twister, and weaver.
- Demonstrate appropriate technologies among the rural artisans.
- The government should give them compensations for the losses incurred in this occupation due to diseases and the negative impact of natural factors.
- There should be enough loan facilities for the improvement of their occupation which is still more beneficial.
- The government should be encouraging them to make clothes along with sericulture occupation.
- Public Private Participation in the Post-cocoon sector and contract farming with NGOs and corporate participation.

In conclusion, even though the participation of Women is high in Sericulture industry and majority of the women entrepreneurs are satisfied with subsidies provided by government, still they face various problems while starting and promoting their sericulture business. Most of the women entrepreneurs involved in Sericulture have minimum educational qualification, so government and sericulture department can organize effective training and development activities for them, which will ultimately reduce the problems and also enable the women entrepreneurs to overcome the obstacles. Sericulture is one among the high income generating industry, hence promoting women entrepreneurs in Sericulture will lead to economic development and empowerment of women. Sericulture is also providing employment for women in rural area. Sericulture is labour intensive activity and it also help to women's for self-development. Sericulture is the best occupation for women's in changing situation of environment. It is possible to have the women empowerment through sericulture industry. Sericulture is ideally suited for land and labour abundant economy like India, not only because it is low capital intensive but also because it is female labour intensive. Gender promotion and thereby social transformation along with poverty eradication is another major feature of this particular sector, through which inclusive development can be translated to these ignored sections of the society.

Higher percentage of female labour can raise the gender dominance of the sericulture farms and gender dominance is associated with higher level of domestic female than hired female. But if the size of household rises and greater amount of workers are being attracted to join the sericulture farms, possibly due to higher returns, they crowd out the female workers. But the welfare impact of a female dominated farm is always redistributed to different sections of the society and a gross level of up-gradation in nutrition and education level is possible only through the spillover effect of this female employment generation. Therefore, holistic level of development is possible via gender promotion only. Development of women workers in this sector actually encompasses all those marginal poorer section where special thrust is urgently required. Gender discrimination against women worker in wage payment has to be legally banned. More incentive scheme (like concession in taxation etc.) should be provided to the employer in order to raise the involvement of women worker in sericulture farms.

Table.1 Participation of women in sericulture industry

S.No	Year	Employment (In Lakh Person)	No of Women (In Lakh Person)
1.	2000-2001	54.00	32.40
2	2001-2002	55.73	33.44
3	2002-2003	56.00	33.60
4	2003-2004	56.50	33.90
5	2004-2005	58.00	34.80
6	2005-2006	59.05	35.43
7	2006-2007	60.03	36.02
8	2007-2008	64.11	38.74
9	2012-2013	70.65	40.00
10	2013-2014	78.85	Not Available
11	2016-2017	80.51	Not Available

Source: Department of Sericulture Industry

Table.2 Problems faced by women entrepreneurs in Sericulture Business

S. No.	Problems	%
1	Lack of time	34
2	Heavy work load	37
3	Physical problems	16
4	Other problems	13
	Total	100

Table 2 indicates that Heavy work load is one of problem faced by most (37%) of the respondents followed by lack of time.

Table.3 Time spend by women entrepreneurs in sericulture activity

S.No	Time spend per day	Percentage
1	Three Hours	29
2	Six Hours	40
3	Above Six Hours	31
	Total	100

Table 3 indicates that most (40%) of the women entrepreneurs spend six hours per day in sericulture followed by 31% of the respondents spending above 6 hours per day

Women workers intensive sericulture also needs some primary institutional support and initiatives so that sole-women (like widows, separated/ divorcee, single) household members can survive. However, there always exists a major gap between policy resolution and policy implementation. Therefore restructuring the process of implementation is also at once required. Then only the gender promotion and inclusive development will be possible. Drastic change in mind set will be a necessity while implementing equal wage

payment and ensuring female dominance in farms. Impact of inclusive development will then be felt, when at all activity level of sericulture, voice of working women can be clearly heard of.

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