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An analysis of potentiality and profitability of the sericulture farmers for sustainable livelihood generation in the Kamrup district of Assam, India

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ABSTRACT

A study was conducted during 2019-20 in the Kamrup district of Assam to know the potentiality and profitability of sericulture for sustainable livelihood generation. A total of 20 numbers of respondents were selected randomly from each village and 40 numbers in each block. Total 120 respondents were selected from the 3 development blocks. Personal interview method using standardized structured interview schedule was used for primary data collection. Analysis of data was done by using frequency and percentage. The results from the study depicted that majority (37.20%) of the respondent's opted 'insurance scheme' as a measure for potentiality and 'by-product utilization' (20.83%) as a measure for profitability of sericulture for sustainable livelihood generation. Majority (60.83%) of the farmers' opted 'cocoon + silk yarn' as their most profitable sericulture based perception.

Key words: Sericulture, Farmers, Potentiality, Profitability, Sustainable livelihood

Introduction

Livelihood comprises people, their capabilities and their means of living, including food, income and assets (Chambers and Conway, 1991). Sustainable livelihood is a remunerative, satisfying and meaningful job that permits each member of a community in nurturing and regenerating the resource base (Khosla, 1999). Sustainable livelihood generation is one of the major potential of the sericulture industry. Sericulture is one of the traditional livelihood activities of many rural families in India. It is one of the propitious agriculture based industry with low investment and high returns within short duration of time. Sericulture is rightly known as "The Industry of the poor" and plays a significant role in transferring wealth from rich class to the poorer section of the society. It is the most appropriate avocation

that has the potential for livelihood generation (Ganie *et al.*, 2018). Policy maker and the planners have given more emphasis into the silk sector due to its potentiality for creating large number of employment. It is considered as one of the premier avenues for socio-economic development in India. Sericulture has given downstream employment in rural and semi-urban areas particularly to socially under privileged group (Dewangan, 2013).

Assam occupies a distinct place in the world sericulture map by producing all the commercial types of silk *viz.*, muga, eri, mulberry and temperate tasar. The state is the leading producer of non-mulberry silk contributing almost 82.29 per cent of muga silk, 70.09 per cent of eri silk, 0.27 per cent mulberry silk production in India and about 14.17 per cent of the total silk production of the country (Anonymous, 2020). Though a steady increase of silk production in

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the state is observed for last couple of years but there is much more scope to increase the production considering the resources, skill and new technology. Sericulture is most suitable to those places having agriculture based economy and abundant labour force. Thus sericulture activities may play an important role in employing the youths of Assam and will be able to contribute to the GDP of the state. Rural employment generation which has become the major focus of the inclusive development in all the developing economies in the era of post-globalization has received enormous scope of expansion under the sericulture industry in Assam. As the literature is meagre, the present study aimed to the potentiality and profitability of the sericulture farmers in the Kamrup district of Assam.

Methodology

The present investigation was carried out in the Kamrup district during the year 2019-20 as it is a traditional district and plays a very important role in contribution of raw silk to the state share. Among the two sub-divisions of the district Kamrup Sadar sub-division was purposively selected based on the large numbers of sericulture farmers. Three community developmental blocks namely Boko development block, Chayani Borduwar development block and Bongaon development block were purposively selected for the study. Two villages were taken from each block. Batakuchi village and Makhandal village from Bongaon development block, Rani Khamar village and Baregaon village from Chayani Borduwa block, Nowapara village and Thangkhula village from Boko development block were selected for the study. A total of 20 numbers of respondents were selected randomly from each village and 40 numbers in each block. For the study a total of 120

respondents were selected from the 3 (three) development blocks. Personal interview method using standardized structured interview schedule was used for primary data collection. Analysis of data was done by using frequency and percentage.

Results and Discussion

The data presented in the Table 1 indicated that majority (37.20%) of the respondents opted 'insurance scheme' as a measure for potentiality of sericulture for sustainable livelihood generation. Insurance scheme is a new area in sericulture development sector and its need has been felt for a long time. It will attract the new generation towards sericulture in the studied area as it will help in reducing the risk to take the venture. 'Solar operated equipments' was opted by 32.40% as a measure for potentiality. Use of solar equipment will help in sustainable development of sericulture in the studied area. Modern appliances (30.00%), financial assistance (13.20%), efficient extension support (18.00%), technical guidance (8.40%) and rearing of bivoltine mulberry breed (4.80%) were also opted by the respondents for sustainable livelihood generation.

Savithri *et al.* (2013) reported that it was the need of the hour is to produce more bivoltine silk for the production of graded silk with advanced technical support, with best competitive price to meet the growing demand of quality silk at national and international level according to the changing fashion. Mukesh *et al.* (2018) observed that solar sprayer equipment is more efficient with lesser cost of production for agriculture purpose. Kumarsean *et al.* (2005) found that the extension contact and mass media plays an important role in educating the farmers about adoption of improved technologies in Chamaraja Nagar of Karnataka.

Table 1. Distribution of sericulture farmers according to different perceptions based on potentiality of sericulture for sustainable livelihood generation (n=120)

Category	Frequency	Percentage	Rank
Efficient extension support	15	18.00	IV
Technical guidance	7	8.40	VI
Modern appliances	25	30.00	III
Financial assistance	11	13.20	V
Rearing of bivoltine breed	4	4.80	VII
Solar operated equipments	27	32.40	II
Insurance scheme	31	37.20	I

Distribution of sericulture farmers according to different perceptions based on profitability of sericulture for sustainable livelihood generation

The data presented in the Table 2 revealed that majority (20.83%) of the respondents opted by-product utilization as a measure for profitability of sericulture for sustainable livelihood generation. It gives additional income to the farmers besides the main income. Pupa, a by-product of sericulture industry has high demand in the study area. By-product utilization for making products such as garlands, dolls, jewellery, wall hanging flower vase etc, have high market demand in the studied area. Respondents opted for integrated farming (16.67%), good marketing facilities (15.83%), cocoon banks (14.17%) export facilities (10.83%), brandship (6.67%), sound government policy support (5.00%), cooperative rearing (4.17%) and diversification of product (2.50%) as profitability of sericulture for sustainable livelihood. Good marketing facilities in the studied area enabled the farmers for getting proper price of cocoon, raw silk, by-product etc. Integrated farming system helped the farmers in earning additional income along with sericulture. Cocoon banks helps in stabilization of the cocoon price. Both rearer and reeler are benefited by it. Product diversification helps the respondents in increasing the sales associated with an existing product line.

Table 2. Distribution of sericulture farmers according to different perceptions based on profitability of sericulture for sustainable livelihood generation (n=120)

Category	Frequency	Percentage	Rank
Good marketing facilities	19	15.83	III
Cocoon banks	17	14.17	IV
Export facilities	13	10.83	V
Brandship	8	6.67	VI
Diversification of products	3	2.50	IX
Sound Govt. policy support	6	5.00	VII
Co-operative rearing	5	4.17	VIII
By-product utilization	25	20.83	I
Integrated farming	20	16.67	II

Table 3. Distribution of sericulture farmers of Kamrup district according to different perceptions based on profitability of sericulture (n=120)

Category	Frequency	Percentage	Rank
Cocoon + Silk yarn	73	60.83	I
Silk yarn+ Pupae	9	7.50	IV
Cocoon	25	20.83	II
Silk yarn	11	9.17	III
Pupae	2	1.67	V

Abdullah *et al.* (1996) have described that efficient marketing system is a must for development of any industry including silk. Reddy and Kumar (2014) reported that in the tasar silk industry by-product utilization hopefully should play a crucial role in the coming years to make the sericulture an economically viable proposition enabling it to withstand competition from other cash crops. Manjunatha *et al.* (2014) revealed that integrated farming system enables the agricultural production system sustainable, profitable and productive. Buhroo *et al.* (2018) reported that proper utilization of secondary and waste products of sericultural industry can generate extra income in addition to the silk, the main output.

Distribution of sericulture farmers of Kamrup district according to different perceptions based on profitability of sericulture

The data presented in the Table 3 indicated that majority of the respondents (60.83%) opted for cocoon + silk yarn as most profitable perceptions followed by cocoon (20.83%) silk yarn (9.17%) silk yarn + pupae (7.50%) and pupae (1.67%) based on sericulture.

Cocoon and silk yarn are the end products from sericulture. Therefore, sericulture is considered as an important cash crop in most of the silk producing countries. Cocoon prices determine the value chain

of silk industry. The studied area was mainly tribal dominated area therefore pupa has got a very high demand. One major benefit of the eri silkworm cocoon is that it can be sold with the pupa inside the cocoon shell and without pupa as well at different price rate. Egg, fabric and host plant were the least profitable categories as perceived by the respondents. It may be due to the fact that, respondents collected dfls (disease free layings) from neighbours, relatives or friends without any monetary transactions.

Contribution of Suwalkuchi and Palashbari area of the district in the states' silk sector is significant. Weavers of Suwalkuchi were highly praised by Mahatma Gandhi during his visit to Assam in 1921. Spinning mill of the area like fabric plus is being able to consume the majority of the eri cocoons produced in the area. Farmers were being able to get the proper price due to the establishment of the spinning mill.

Kumaresan and Prakash (2001) found that irrigated sericulture was more profitable than the agricultural crops like paddy, sugarcane, gingili and groundnut.. Srinivasa *et al.* (2005) reported that the practice of sericulture provides a year - round income when compared to crop production which has seasonal income. Kumaresan *et al.* (2008) revealed that there was 31.08% difference in income from cocoon production between the large-scale silkworm rearers and small-scale rearers in Tamil Nadu. Manjunatha *et al.* (2017) reported that mulberry rearers of Kolar district of Karnataka earned an income of Rs. 1.59 for every rupee invested in silkworm cocoon production activity.

Conclusion

The study revealed that majority (37.20%) of the respondent's opted 'insurance scheme' as a measure for potentiality and 'integrated farming' (20.83%) as a measure for profitability of sericulture for sustainable livelihood generation in Kamrup district. Majority (60.83%) of the farmers' opted 'cocoon + silk yarn' as their most profitable sericulture based perceptions. Government/NGOs/local organization may come up with related policy and schemes like insurance, financial grant, free equipments etc. to encourage the sericulture farmers. Since, "cocoon + silk yarn" is the most profitable venture for the sericulture farmers, farmers should be encouraged for both silkworm rearing as well as silk reeling. Thus

from the study it can be concluded that sericulture has immense potential for sustainable livelihood generation in the Kamrup district of Assam.

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