Original Research Article

Analysis of Constraints on Production and Marketing of Tasar and Mulberry Silk In Chhattisgarh

ABSTRACT

The study conducted “Analysis of constraints on production and marketing of tasar and mulberry silk in Chhattisgarh” included four district *i.e.*Bastar, Korba, Jashpur and Raigarh. In each district one block from , from Bastar district Jagdalpur block, from Jashpur district Kansabel block, from Korba district Korba block and from Raigarh district, Dharamjaigarh block has been selected for the study on the basis of maximum tasar and mulberry seed centres and 16 villages has been selected for the study, information pertaining to the primary data was collected from 160 cocoon growers in selected areas, through well prepared interview schedule/ questionnaires. The study observed that tasar and mulberry cocoon grower and their marketing was found to be major constraints unavailability of labour during production process it was rank first according to measurement, respectively silk worm, lack of knowledge in the maintenance of host plant , unavailability of good quality plantation, lack of technical guidance , unavialablity of input on time, difficulty obtaining DFL’s,lack of knowledge about training and pruning of host plant among marketing constraints suffers SHG’s were obtaining rank first lack of marketing facilities, followed by poor quality of cocoon , difficulties of grading of cocoon, lack of market information regarding the price of tasar and mulberry cocoon, lack of proper price received by cocoon growers, transportation cost, lake of proper payment facility to silk grower and lack of storage facilities of cocoon despite all the constraints the area has great potential for silk production..Therefore cocoon growers at the study area can be provide with adequate knowledge in both tasar and mulberry cocoon production to enhance the production and productivity of cocoon.

Keywords:-*Production, Marketing ,Tasar, Mulberry , Cocoon, Constraint.*

INTRODUCTION

The Greek word "Sericos," which means "silk," and the English word "culture," which means "rearing," are the roots of the phrase "sericulture." The process of producing silk is known as "sericulture," and it entails mulberry farming, silkworm rearing, and post-cocoon operations that result in the creation of silk yarn or raw silk. Most people are unaware of the lengthy and colorful history of sericulture, or the manufacture of silk. For many years, the West had little knowledge about silk and its producers. The Roman historian Pliny stated that "Silk was obtained by separating the down from the leaves with the help of water" in his Natural History circa 70 BC. Sericulture is the origin of sustainable livelihood for sericulture farmers and it is an important subsidiary activity that provides

Comment [I51]: I appreciate the clear outline of the research problem; however, I suggest elaborating slightly on the relevance of the problem within the broader field to provide more context to readers.

year-around employment to family labour and helps in augmenting household income to large and weaker sections of the peoples in the rural areas (Vishakanta, 2018). There are more than 58 countries practicing sericulture in the world. In India, silk cultivation is spread over 22 states and it covering 1.72 lakh hectares across 54000 village looms operating, 258000 handlooms and 29340 power loom (Dewangan *et al.,* 2012). Mulberry sericulture is primarily conducted in five states: Karnataka (42.24%), Andhra Pradesh (30.71%), West Bengal (11.67%), Tamil Nadu (8.99%), and Jammu and Kashmir (4.43%), which together account for about 98 percent of the country's total mulberry silk production. It has a strong domestic silk market that is tied to tradition and culture. Jharkhand, Chhattisgarh, Orissa, and the north-eastern states produce non-mulberry silks (Kumar *et al., 2019*). The Central Silk Board is a statutory body that was established in 1948 to promote sericulture and the silk industry in the country. Silk is the most delightful textile in the world. India accounts for the second-largest producer of silk in the World after China and contributed about 16.58 percent (Dewangan, 2017) and about 10.52 percent increased during 2018-19 over the previous year in India (Economic Times, 2019).

Deepa and Sujathamma (2007) recorded the reasons for non-adoption of improved practices in sericulture in semiarid conditions of Chittoor district of Andhra Pradesh werelack of economic resources, indifference on the part of the rearers, lack of effective extension activities, lack of proper coordination between farmers and extension workers, nonavailability of quality layings, lack of water facilities and supply of electricity. The main constraints with the farmers in adoption of new technologies in Kolar district were multiple cropping system and land allocation, plant spacing, non-availability of irrigation, fertilizers and labour, assessment of mulberry leaf for quality and yield (Rao and Kamble, 2009).

METHODOLOGY

Comment [I52]: While the methodology was well-presented, I recommend considering a brief comparative analysis with alternative approaches to showcase the robustness of the chosen method.

Details of Study area

The present study has been conducted in Bastar, Jashpur, Korba and Raigarh district of Chhattisgarh state in India. In four district, from Bastar district Jagdalpur block, from Jashpur district Kansabel block, from Korba district Korba block and from Raigarh district Dharamjaigarh block has been selected for the study on the basis of maximum tasar and mulberry seed centres and 16 villages has been selected for the study. The present study was conducted based on the both primary and secondary data were used for study. Survey method is used to collect the needed information about data, related to income, employment, expenditure, marketing details and constrains was collected from selected tasarand mulberry seed centre's.

Source and Method of data collection

Both primary and secondary date were used for study. Survey method is used to collect the needed information. The data related to income, expenditure, marketing details and constraints was collected from selected seed centre's.

Primary data

The primary data were used, which was collected from SHG's and tasar and mulberry seed centre supervisor. The data was collected using personal interview method and prepared questionnaire schedule from Bastar, Jashpur, Korba and Raigarh districts tasar and mulberry seed center's.

Secondary data

Secondary data was also collected for the study from Directorate of Rural Industries (Sericulture sector), Government Sericulture department and the secondary data was also collected from government website and other publications and District Statistical Year-book.

Analysis of constraints

Garrett's Ranking Technique was used to priorities the constraints encounter by tasar and mulberry cocoon growers and the marketing of mulberry and tasar silk .

$$\text{Percent position} = 100 * (R_{ij} - 0.5)/N_j$$

Where,

R_{ij} = rank given for i^{th} constraint by j^{th} individual

N_j = number of constraint ranked by j^{th} individual

Constraint in Tasar and Mulberry cocoon production

Problems faced by SHG's during cocoon production

These are categories into constraints in tasar and mulberry cocoon production ,unavailability of labour during production process.

Problems faced of SHG's in marketing of cocoons

These are categories into constraints in tasar and mulberry cocoon Marketing,lack of marketing facilities,poor quality of cocoon marketing, etc.

RESULT AND DISCUSSION

Constraints in tasar and mulberrycocoon production

The major constraint faced by the tasar and mulberry producer SHG's during production was, unavailability of labours during production process with Garret mean score 67 obtaining rank I^{st}, followed by Problem of Pest and diseases of silkworm(Garret mean score 60), lack of training about improved method of rearing of silkworm(Garret mean score 59), lack of knowledge in the maintenance of host plant (Garret mean score 52), Unavailability of good quality plantations(Garret mean score), lack of technical guidance (Garret mean score 49), Unavailability of inputs in time(Garret mean score 47), difficulty in obtaining DFL's(Garret mean score 34) and Lack of knowledge about training and pruning of host plant(Garret mean score 30). According to Sen *etal.(2022),*who reported that the major constraints during tasar cocoon production in Kanker district of Chhattisgarh was fluctuation in weather lead to effect of silkworm with Garret mean score 17 and percentage with 95.60 with rank first, followed by problem of pest and diseases of silkworm(Garret mean score 29, rank II), lack of training about improved methods of rearing(Garret mean score 56, rank III), unavailability of good quality of plantations(Garret mean score 62, rank IV), improper

Comment [I53]: The results section was comprehensive, but to enhance clarity, I recommend utilizing subheadings to distinguish between major findings and any secondary observations.

The discussion was insightful, yet there is an opportunity to draw stronger connections between the results and the initial research objectives. This would offer readers a more coherent understanding of the research journey.

knowledge in the use of disinfectants(Garret mean score 62, rank V), lack of technical guidance(Garret mean score 72, rank VI), non availability of input in time(Garret mean score 79, rank VII), difficulty in obtaining DFL's (Garret mean score 81, rank VIII)etc.More than half (54%) of the respondents in the Bidar district of north Karnataka who were surveyed about their knowledge of improved sericulture production technologies fell into the medium knowledge category, while 20% of the respondents had either low or high levels of knowledge (Hadimani et al., 2017). In Chamarajanagar district, a large group of farmers reported that lack of devices for mulberry leaf preservation was a constraint (75.00%), and that lack of labourers for harvesting cocoons (3.330%) and lack of transportation for cocoons (3.330%) were the least constraints. Average numbers of farmers who reported output constraints included 56.41% of large farmers, 53.64% of medium farmers, 48.40% of small farmers, and 53.88% of all farmers (Raju, 2018).

Constraints in tasar and mulberry cocoon marketing

The major constraints faced by the tasar and mulberry cocoon producer during marketing was, lack of marketing facilities with Garret mean score 59 and obtaining rank Ist, poor quality of cocoon(Garret mean score 57, rank II), difficulties of grading of cocoon(Garret mean score 56, rank III), lack of market information regarding the price of tasar and mulberry cocoon(Garret mean score 53, rank IV), lack of proper price received by cocoon grower (Garret mean score 52, rank V), transportation cost(Garret mean score 48, rank VI), lack of proper payment facilities to silk growers,(Garret mean score 47, rank VII), lack of storage facilities of cocoon(Garret mean score 41, rank VIII) and lack of knowledge during storage of cocoon(Garret mean score 26, rank IX).Sen *et al.*(2022), reported that on his study in Kanker district of Chhattisgarh state, major constraints facing during tasar cocoon marketing was lack of marketing facilities followed by poor quality of cocoon, payment received is not done promptly, lack of market information regarding the price of tasar cocoon amd transportation cost also Dewangan(2023), conducted his study in Kanker district of Chhattisgarh on mulberry constraints during marketing of mulberry cocoons was monopsony (single buyer) with mean Garret mean score 68.86 obtaining rank 1st followed by poor quality of silk, lack of reasonable price, fail to make timely payment and high transportation cost.

Table 1. Constraints faced by tasar and mulberry cocoon producer (No. of Respondent = 160)

Problems faced by SHG's during cocoon production			
Sr. No.	**Particulars**	**Garret mean score**	**Rank**
1	Lack of technical guidance	49	VI
2	Unavailability of inputs in time	47	VII
3	lack of knowledge in the maintainance of host plant	52	IV
4	Problem of Pest and diseases of silkworm	60	II
5	Difficulty in obtaining DFL's	34	VIII

6	Unavailability of good quality plantations	50	V
7	Lack of training about improved method of rearing of silkworm	59	III
8	Unavailability of labours during production process	67	I
9	Lack of knowledge about training and pruning of host plant	30	IX

Table 2. Constraints faced by tasar and mulberry cocoon producer (No. of Respondent = 160)

Problems faced of SHG's in marketing of cocoons			
Sr. No.	**Particulars**	**Garret mean score**	**Rank**
1	Lack of marketing facilities	59	I
2	lack of proper payment facility to silk grower	47	VII
3	Transportation cost	48	VI
4	Lack of market information regarding the price of tasar and mulberry cocoon	53	IV
5	Poor quality of cocoon	57	II
6	Lack of storage facilities of cocoon	41	VIII
7	lack of proper price received by cocoon grower	52	V
8	lack of knowledge during storage of cocoon	26	IX
9	Difficulties in grading of cocoon	56	III

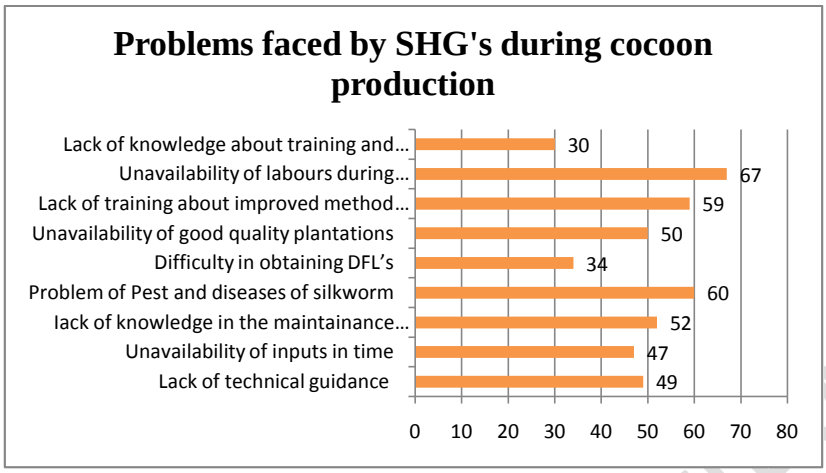

Fig 1:Problems faced by SHG's during cocoon production

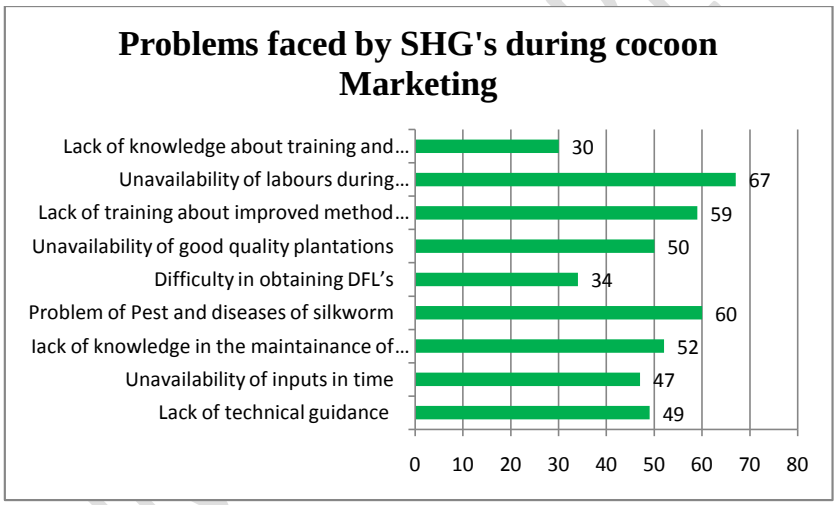

Fig 2: Problems faced by SHG's during cocoon Marketing

CONCLUSION

1. Total 04 district selected for research study.
2. Total 16 villages selected for research study.
3. Total 04 blocks and 160 respondent selected for the study.
4. In Chhattisgarh, for districts *i.e.*Bastar, Korba, Jashpur and Raigarhrevealed that during tasar and mulberry cocoon production the major constraints was lack of marketing facilities with Garret mean score 59 and obtaining rank I^{ts}followed by poor quality of cocoon obtaining Garret mean score 57,with rankIInd.

Comment [I54]: The conclusion adequately summarized the study's outcomes; however, I encourage emphasizing the broader implications of these findings for the field.

5. In Chhattisgarh, for districts *i.e.*Bastar, Korba, Jashpur and Raigarh revealed that during tasar and mulberry cocoon marketing the major constraints was lack of marketing facilities with Garret mean score 59 and obtaining rank Ist followed by poor quality of cocoon Garret mean score was 57 with rank IInd.

SUGGESTION

1. To raise silkworms even in unfavourable circumstances, the sericulture department needs create weather-tolerant silkworm races.
2. The production of mulberry and silk cocoons was severely constrained by high insect and disease attack rates during cocoon production. In order to control the pests and illnesses that affect the production of mulberry silk, various extension activities such as trainings, demonstrations, etc. must be organized.
3. Continually educating the sericulturists to improve the production of high-quality cocoons through cost-effective pest and disease management measures.
4. Sericulturists' fields should continue to receive periodic visits from sericulture field inspectors. and to impart knowledge regarding current silkworm-rearing technologies.
5. The government needs to set up the necessary infrastructure for these local markets to thrive. The district as well as the state of Chhattisgarh work to ensure that SHGs or sericulturists receive a fair price for their produce.

REFERENCES

Banerjee, S., (2016), Tasar value chain analysis a summery Chhattisgarh, Central Silk Board, Bangalore and Professional assistance for development action (PRADAN).

Deepa P, Sujathamma P. Information source and consultancy pattern of different sericultural technologies at field level and technology adoption in the semi-arid conditions of Chittoor district in Andhra Pradesh. Indian Journal of Sericulture. 2007; 46(1):86- 88.

Dewangan J. An Exonomic Analysis of Production and marketing of mulberry silk in Kanker district of Chhattisgarh. Ph.D. Thesis. Indira Gandhi Krishi Vishwavidyalaya, Raipur, 2023.

Dewangan SK, Employment Generation and Socio-Economic Change through Sericulture in Raigarh District, Chhattisgarh, India. Annals of Natural Sciences, 2017;*3*(2):32-42.

Dewangan SK, Sahu KR and Soni SK. Breaking of poverty through sericulture among the tribe- A Socio-Economic study of Dharamjaigarh block of Raigarh Dist, C.G., India. Research Journal of Recent Sciences. 2012;1:371- 374.

Hadimani DK and Moulasab JA., Manjunath “An Impact study of sericulture Production Technologies by the farmers of Bidar District in Karnataka, India. International Journal of Current Microbiology and Applied Sciences, 2017;6(11):2368-2374.

Kumar GA, Reddy BS, Goudappa SB, Hiremath GM and Patil SS. Growth Performance of Silkworm Cocoon Production in Karnataka, India. Int. J. Curr. MicrobiSol. App. Sci. 2019.;8(11):674-682.

Raju M. Yield gap and constraints in cocoon production under rainfed and irrigated conditions of Chamarajanagar district (Karnataka state). Ph.D. Thesis. University of Mysore, Mysuru, 2018.

Rao PRM and Kamble CK. Impact of demonstration of technology package in sericulture extension and future extension strategies. Indian Journal of Sericulture. 2009;48(2):178-18

Sen MK. An Economic Analysis of Production and marketing of tasar silk in Kanker district of Chhattisgarh. Ph.D. Thesis. Indira Gandhi Krishi Vishwavidyalaya, Raipur, 2022.

Visakanta. An Economic Analysis of Area, Production and Productivity of Sericulture in India and Karnataka. International Journal for Research in Applied Science & Engineering Technology. 2018;1:3266-3272.