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Constraints faced by Tasar cocoon producers and their suggestions to enhance the effectiveness of Tasar development and extension programme (TDEP)

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Abstract

India is the world's second-largest producer and primary supplier of silk to international markets. Sericulture can help keep the rural population employed and to prevent migration to big cities and secure remunerative employment; it requires small investments while providing raw materials for textile industries. The research was carried out in the year 2021-22 in two blocks namely Baloda and Pamgarh of Janjgir-Champa district of Chhattisgarh state because these two blocks consist of maximum tasar cocoon beneficiaries and large area under this programme. For the present study 150 tasar cocoon producers were selected randomly from the list of the beneficiaries of Tasar Development and Extension Programme. It was seen that maximum of the tasar cocoon producers had constraints related to insects, diseases & natural enemies of tasar silkworms, followed by constraints, related to lack of technical and scientific knowledge and related to training & pruning of host plant which were ranked second and third, Relatively majority of the tasar cocoon producers suggested for provision of knowledge of pesticides, fungicides and biopesticides at the time of incidence insects and diseases followed by suggestions of government should be encouraging them to make clothes along with sericulture occupation and provision of skill-oriented, specific, timely training programme by the concerned department on tasar cocoon production.

Keywords: Tasar cocoon production, TDEP programme, constraints, suggestions

Introduction

Silk is a natural fibre and was amongst the earliest fibres discovered by the man. A caterpillar, also referred to as a "silkworm," secretes proteins in the fluid state as a single filament to form the fibroin known as silk. Silkworm has four stages: egg, silkworm, pupa, and moth in their life cycle. Man intervenes in this life cycle at the cocoon stage to produce the continuous commercially valuable filament known as silk that is used to weave the fabric of dreams.

The major silk-producing countries in the world is China, while India ranks second. Despite having a tiny market share of less than 0.2% in the world's textile market (the precise figure is difficult to determine because most importing nations lack reliable data on completed silk products), silk is produced in 60 different countries across the world. The majority of mulberry production and nearly all non-mulberry silk are produced in Asia, but sericulture companies have recently been formed in Brazil, Bulgaria, Egypt, and Madagascar as well. Sericulture requires a lot of labour. The silk industry in China employs about 1 million people. 7.9 million People in India and 20,000 weaving families in Thailand are employed by the silk industry. The world's largest producer and primary supplier of silk to international markets are China. India is the world's second-largest producer. Sericulture can help keep the rural population employed and to prevent migration to big cities and secure remunerative employment; it requires small investments while providing raw materials for textile industries

India has the unique distinction of being the only country producing all the five known commercial silks, namely, Mulberry, Tropical Tasar, Oak Tasar, Eri and Muga, of which Muga has golden yellow glitter is unique and prerogative of India. Among the four varieties of silk produced in 2020-21, Mulberry accounted for 70.72% (23,860 MT), Tasar 8.02% (2,705 MT), Eri 20.55% (6,935 MT) and Muga 0.71% (239 MT) of the total raw silk production of 33,739 MT (Provisional)

At the time of the formation of a new state of Chhattisgarh, the sericulture sector of DORI (Directorate of Rural Industries) had approximately 12269 hectares of land having Saja, Arjuna plantation.

Janjgir-Champa is famous not only in India but in the whole world for its production of Tasar Silk.

At present 520 Hectares of land having Saja/Arjuna Plantation is available for the production of Cocoon, in which 500 beneficiaries are working for the production of Silk. At present, 45 lakh silk (Cocoon) is produced at the District of Janjgir-Champa, whereas the demand is above 5.00 Crore. So, in order to increase the production of silk the district administration has projected some plans.

Material and Methods

The present study was conducted in the Janjgir-Champa district of the Chhattisgarh state, during the year 2021-22. The study was conducted purposively in the Janjgir-Champa district of Chhattisgarh state because Janjgir-Champa is tasar dominated area and it also consist one of the large beneficiaries of this programme and also has GI tag for tasar silk and fabrics. There are 9 blocks in the Janjgir-Champa district, out of which two blocks $(1 \times 2 = 2)$ namely Pamgarh and Baloda blocks were selected purposively because it consists of more beneficiaries and a large area covered under the programme. From each selected block 75 Tasar cocoon

producers were selected randomly from the list of the beneficiaries of Tasar Development and Extension Programme, thus total 150 (75×2) Tasar cocoon producers were selected as respondents for this study.

Results and Discussion

The data documented in Table 1 revealed that the majority (73.33%) of the tasar cocoon producers faced constraints related to insects, diseases & natural enemies of tasar silkworms, followed by 50.66 per cent and 50.00 per cent respondents faced constraints, related to lack of technical and scientific knowledge and related to training and pruning of host plant, respectively. More than three fourth of the respondents faced constraints related to rats in storing of cocoons, and irrigation in summer season for host plants. Less than one fourth of the respondents faced constraints related to proper marketing facilities during tasar cocoon production and spraying of insecticides, fungicides & bio-pesticides in host plants.

Table 1: Constraints faced by tasar cocoon producers related to tasar cocoon production

Sl. No.	Constraints	Frequency	Percentage	Rank
1	Insects, Diseases & Natural enemies are major constraints.	110	73.33	I
2	Lack of proper marketing facilities during tasar cocoon production.	48	32.00	VI
3	Lack of technical and scientific knowledge.	76	50.66	II
4	Lack of knowledge about training and pruning of host plant.	75	50.00	III
5	Rats are a major constraint for storing cocoon	68	45.33	IV
6	Lack of good fencing facilities & protection of tasar cocoon plants.	47	31.33	VII
7	Lack of proper knowledge about the spraying of insecticides & fungicides in host plants.	22	14.66	VIII
8	Lack of proper knowledge about the spraying of bio-pesticide.	21	14.00	IX
9	Lack of irrigation facilities during the summer season for host plants.	62	41.33	V

^{*}Data are based on multiple responses

Findings from the table 2 clearly indicated that majority (66.67%) of the tasar cocoon producers suggested that knowledge of pesticides, fungicides and biopesticides should be provided at time of incidence of insects and diseases, followed by 58.66 per cent and 57.33 per cent of respondents suggested that government should encourage them to make clothes along with sericulture occupation and provision of skill-oriented, specific, timely training programme by the concerned department for tasar cocoon production. Approximately half of the respondents suggested for regular visit of sericultural personnel should be assured in the tasar

cocoon plantation area and storage facility should be provided to the producers to protect stored cocoons from rats & enemies. Less than fifty per of respondents suggested that payment should be made timely, and irrigation facilities during the summer season for host plants should be provided. Whereas very few of tasar cocoon producers i.e. 30.00 per cent and 14.66 per cent, suggested that good fencing facilities should be provided for silkworms and host plants & printed materials like pamphlets, bulletins, etc. on tasar cocoon production technology should be facilitated.

Table 2: Suggestions by the tasar cocoon producers to overcome the constraints

Sl. No	Suggestions	Frequency	Percent	Rank
1	Provide irrigation facilities during the summer season for host plants.	60	40.00	VII
2	A regular visit of sericultural personnel should be assured in the tasar cocoon plantation area.	85	56.67	IV
3	The knowledge of which pesticides, fungicides and biopesticides should be provided at the time of incidence of insects and diseases.	100	66.67	I
4	Printed materials like pamphlets, bulletins, etc. on Tasar cocoon production technology should be provided.	22	14.66	IX
5	Payment should be made timely.	65	43.33	VI
6	A skill-oriented, specific, timely training programme should be organized on Tasar cocoon production by the concerned dept.	86	57.33	III
7	Provide good fencing facilities for silkworms and host plants.	45	30.00	VIII
8	A store facility for tasar cocoons should be provided to the producers to protect them from rats & enemies.	75	50.00	V
9	The government should encourage them to make clothes along with sericulture occupation.	88	58.66	II

^{*}Data are based on multiple response

Conclusion

It can be concluded from the present study that the majority of the tasar cocoon producers had constraints related to insects, diseases & natural enemies of tasar silkworms. followed by half of the respondents who faced constraints related to lack of technical and scientific knowledge which was ranked second, Majority of the tasar cocoon producers suggested that knowledge of pesticides, fungicides and biopesticides should be provided at the time of incidence of insects and diseases, followed by government should be encouraging them to make clothes along with sericulture occupation.

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