

Study on Impact of the Socio Economic conditions of the Sericultural Farmers on Cocoon Production

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ABSTRACT: Sericulture industry is of great economic importance to state as it gives occupation to large number of people. Jammu and Kashmir is the only state in the country that is at the same altitude as the world's leading Bivoltine sericulture countries and has a climatic advantage over the other states in the production of Bivoltine cocoons and silk. Although maximum productivity is a must for any business, whether industrial or agricultural. This is also true for sericulture, which in Kashmir is characterised by low productivity and higher production costs. In India's raw silk production contribution of Jammu & Kashmir state is very small, although Kashmir was at one time the premier producer of silk in the country yet with the passage of time there has been a decline in cocoon production. In Kashmir division sericulture is practiced in ten districts among which Anantnag Pulwama, Kupwara and Baramulla are famous for cocoon production yet Anantnag district is considered to be famous and traditional district of sericulture with the well organized base and emotional attachment of the people with sericulture where 121 villages are even now involved in sericulture having more than 1399 sericulture families producing 56622 kgs of cocoons from 1304 ozs of silkworm eggs (DFLs) and earning Rs. 1,35,72,951.00. Technology dissemination is regarded as more important than technological development. The partial adoption of new technologies leads to loss of interest and confidence of the farmers towards new developments. personal, economic, communicational and psychological characteristics. With this background, current study was conducted at district Anantnag to find the impact of socio economic conditions of sericultural farmers on the cocoon production.

Keywords: Anantnag, Cocoon production, Study, Respondents, Sericulture.

INTRODUCTION

Sericulture is the practise of rearing silkworms for the production of cocoons, which are used in the production of silk. Mulberry sericulture is a land-based, environmentally friendly economic activity that is labour intensive and pays well to farmers. It is very important in the socioeconomic upliftment of the rural population (Sreenivasa and Hirayana 2014). Many new and improved technologies have been developed in recent years by Research Institutes, bringing the sericulture industry to a new level of cocoon and raw silk production. It can provide full-time employment to an entire family while also providing a higher income and a higher standard of living. Sericulture is comprised of two major activities: (i) Mulberry cultivation and (ii) Silkworm rearing (Shashi, 2017). The desired

productivity is determined by the acceptance of new technologies as well as the extent to which farmers adopt these technologies. Adoption of a new technology is not a simple and one-time event; rather, a variety of social, economic, psychological, physical, and biological factors all have a significant impact on the process (Singh and Yadav 1989). Improved technologies, even if scientifically sound, have limited value if they are not adopted because they are inappropriate for the agroclimatic and socioeconomic conditions in which farmers operate.

Sericulture is practised in 20 districts of Jammu and Kashmir (J&K). The major silk production districts are Anantnag, Kupwara, Pulwama, Baramulla, Ganderbal, Udampur, Rajouri, Reasi and Kathua. Jammu & Kashmir is producing bivoltine silk of high quality comparable to international quality helps in improving

the economic condition of the sericulture farmer and weaker sections of the society. It is providing high scope of employment opportunities in pre and post cocoon activities. Anantnag is the southernmost district of the valley situated at a distance of 55 Kms from Srinagar. It shares its boundaries with district Pulwama and Kulgam in the west and from south to east is attached to Ramban, Doda and Kishtwar. In the north it borders with Ganderbal. The district has 605 villages out of which 121 practices sericulture. District Anantnag is divided into four sericultural zones namely Khoverpora, Dachinipora, Kuthar and Kokernag. In the present study, a sample of 120 Silkworm rearers was selected from all of the four zones purposively.

METHODOLOGY

The present study was conducted in four zones of district Anantnag. One hundred and twenty respondents were selected. Data was collected by direct personal interview method using a questionnaire as followed by Mech *et al.* (2004). Data was collected on family size, area under mulberry, source of information, income from sericulture, annual income, cocoon production and rearing capacity. Family size was categorized as small, medium and large. Land holding and area under mulberry was categorized as low, medium and high. Source of information was done as per the scale developed by Nirban (2004) with a score of '2' for 'Regular users', '1' for 'occasional users' and '0' for 'ones who never used it'. Annual income and income from sericulture was categorized as annual income group 1, annual group 2 and annual income group 3 and income group 1, income group 2 and income group 3 respectively. Cocoon production and rearing capacity were categorized as low, medium and high.

RESULTS AND DISCUSSION

The cocoon production and socio factors like family size, land holding, area under mulberry, source of information, income from sericulture, annual income and rearing capacity were analyzed in the given tables. The extent to which farmers adopt new sericultural innovation determines production. It is believed that a large portion of the benefits of new sericultural technology have yet to be realised as a result of non-adoption of new technologies.

Table 1: Distribution of silkworm rearers according to the family size.

Sr. No.	Category	Class	Frequency	Percentage
1.	Small	Upto 4 members	28	23.33
2.	Medium	5 – 8 members	74	61.67
3.	Large	Above 8 members	18	15.00
Total			120	100.00

Table 1 describes that of the total sample of rearers (120), 23.33 percent were having a small family, 61.67 percent were having a medium family and 15 percent were having a large family.

Table 2: Distribution of silkworm rearers according to their land holding.

Sr. No.	Category	Class	Frequency	Percentage
1.	Low	Upto 1 Kanal	20	16.67
2.	Medium	1.1-7 Kanals	84	70.00
3.	High	More than 7	16	13.33
Total			120	100.00

Table 2 describes that of the total sample of rearers (120), 16.67 percent were having a low land holding of upto 1 kanal, 70 percent were having a medium land holding of 1 to 1.7 kanal and 13.33 percent were having high land holding of more than 7 kanals.

Table 3: Distribution of silkworm rearers according to their area under mulberry.

Sr. No.	Category	Class	Frequency	Percentage
1.	Low	0-1 Kanal	70	58.33
2.	Medium	1-2 Kanals	49	40.83
3.	High	>2 Kanals	01	0.83
Total			120	100.00

Table 3 describes that out of total sample of rearers (120), 58.33 percent were having low area under mulberry i.e. 0 to 1 kanal, 40.83 percent were having medium area under mulberry i.e. 1 to 2 kanals and 0.83 percent were having high area under mulberry i.e. more than 2 kanals.

Table 4: Distribution of silkworm rearers according to their income from sericulture.

Sr. No.	Category	Frequency	Percentage
1.	Income group 1(Upto 20000)	86	71.66
2.	Income group 2(20000-40000)	23	19.16
3.	Income group 3(40000-60000)	11	9.16
Total		120	100.00

Table 4 describes that out of the total sample of rearers (120), 71.66 percent were having income of upto 20000 from sericulture, 19.16 percent were having income of 20000 to 40000 from sericulture and 9.16 percent were having income of 40000 to 60000 from sericulture.

Table 5: Distribution of silkworm rearers according to their rearing capacity

Sr. No.	Category	Class	Frequency	Percentage
1.	Low	0.1-1.5 ounces	76	63.33
2.	Medium	1.5-2.5 ounces	39	32.5
3.	High	>2.5 ounces	05	4.16
Total			120	100.00

Table 5 describes that out of the total sample of rearers (120), 63.33 percent were having low rearing capacity of 0.1 to 1.5 ounces, 32.5 percent were having medium rearing capacity of 1.5 to 2.5 ounces and 4.16 percent were having high rearing capacity of more than 2.5 ounces.

Table 6: Distribution of silkworm rearers according to the cocoon production.

Sr. No.	Category	Class	Frequency	Percentage
1.	Low	upto 30 kg	85	70.83
2.	Medium	30kg-60 kg	27	22.50
3.	High	> 60 kg	8	6.66
Total			120	100.00

Table 6 describes that out of the total sample of rearers (120), 70.83 percent were having low cocoon production of upto 30 kgs, 22.50 were having medium cocoon production of 30 to 60 kgs and 6.66 percent were having high cocoon production of more than 60 kgs.

Table 7 describes that out of the total sample of rearers(120), 50.83 percent were having low source of information, 40 percent were having medium source of information and 9.16 percent were having high source of information.

Table 7: Distribution of silkworm rearers according to the source of information

Sr. No.	Category	Frequency	Percentage
1.	Low	61	50.83
2.	Medium	48	40.00
3.	High	11	9.16
Total		120	100.00

Table 8: Distribution of silkworm rearers according to the total annual income.

Sr. No.	Category	Frequency	Percentage
1.	Annual income group I (upto Rs. 70000)	62	51.66
2.	Annual income group II (Rs 70001 to Rs. 125000)	38	31.66
3.	Annual income group III (above Rs. 125000)	20	16.66
Total		120	100.00

Table 8 describes that out of the total sample of rearers (120), 51.66 percent were having income of upto Rs. 70000, 31.66 percent were having annual income of Rs. 70001 to Rs.125000 and 16.66 were having annual income of more than Rs.125000.

Table 9: Independent variables influencing the cocoon production.

Variable	Correlation coefficient	P value
Age	-0.054	0.558
Family size	0.856*	0.049
Family type	-0.015	0.869
Education	-0.020	0.827
Occupation	0.106	0.249
Land holding	0.351**	0.000
Area under mulberry	0.337**	0.000
Experience	0.018	0.845
Source of information	0.290**	0.001
Extension contact	0.205	0.253
Scientific orientation	0.022	0.814
Income from sericulture	0.505**	0.000
Annual income	0.310**	0.001
Rearing capacity	0.683**	0.000

*Significant at 0.05; **Significant at 0.01

From the above table, it can be seen that the variables like age, family type, and education were negatively correlated with the cocoon production while as the variables like family size, land holdings, area under mulberry, source of information income from sericulture, annual income and rearing capacity were positively correlated with the cocoon production.

Among the different factors that influences the cocoon crop production, the land holding capacity, area under mulberry and source of information are the major constraints faced by farmers. The lack of crop insurance facility by NGO's and crop insurance schemes for sericulture farmers is one of the significant factor in determining the production. Furthermore, rearing in

develing houses is also one of the constraints that can be addressed by the low cost rearing hut technology. Requirement of timely marketing and organization of skill oriented training programme can increase the cocoon crop production.

The results are in confirmation with the Dar *et al.* (2009) who has found that leaf shortage, lack of technical knowledge and non availability of timely marketing facilities are main constraints faced by the rearers.

CONCLUSION

Farmers having high source of information, high rearing capacity, high area under mulberry and high

land holdings were having a high cocoon production. In order to increase the cocoon production further in the investigated area there is much need of awareness about latest sericultural technologies. Furthermore, proper extension support for the transfer of technologies from the lab to the field is critical in the adoption of new practices. Extension activities should be designed in such a way that farmers are convinced of the benefits of using improved techniques.

REFERENCES

- Dar, H. U., Farhat, I. Q. and Munshi, N. A. (2009). Constraints of silkworm rearers of Kashmir valley for adoption of rearing technology. *Indian Journal of Sericulture*, 48(1), 96-99
- Mech, D., Borah, A., Singh, K. C. and Suryanarayana, N. (2004). Adoption of improved technology package and its impact on production of Muga – a case study. *Indian Journal of Sericulture*, 43(1), 95-98.
- Nirban, A. J. (2004). Analysis of the Agricultural produce market committees in Konkan and Western Maharashtra with reference to their potential role in Agricultural marketing extension. Ph. D. (Agri.) Thesis (Unpublished) Mahatma Phule Krishi Vidyapeeth, Rahuri (M.S.).
- Shashi Kanta (2017). Improved technologies and their impact on cocoon production of the adopted rearer. *Cibitech Journal of Bio-Protocols*, 6(1), 1-4.
- Singh, K. and Yadav, J. P. (1989). Gaps and constraints in wheat productivity: A system analysis. Agricultural situation in India, XLIV, 627-632.
- Sreenivasa, B. T. and Hiriyanna. (2014). A study on the factors influencing adoption of new technologies in the non-traditional sericultural area of Chitradurga District, Karnataka. *Global Journal of Biology, Agriculture & Health Sciences*, 3(1), 239-243.

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