

Determinants influencing adoption of improved sericulture practices in Jammu

Aradhana Sharma^{1*}, Rucku Gupta², Rakesh Kumar³ and P S Slathia⁴

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¹J&K Sericulture Development Department, Jammu, J&K, India

^{2,3,4}FoA, SKUAST, Jammu 180 001, J&K, India

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The average yield of 25 kg of cocoons/100 dfls in the recent past has increased to 65 kg/100 dfls

(Chouhan *et al.*, 2016). In India, Jammu and Kashmir is one of the leading bivoltine silk producing state. The

Table 1. Variables affecting adoption of improved mulberry and silkworm rearing practices (Binary Logistic Regression)

Dependent variable	Independent variables	Coefficient B	S.E.	Wald	P-value	Exp (B)
Plantation of recommended varieties	Constant	-6.617	3.909E4	.000	1.000	.0001
	Annual Income	.000	.000	6.291	.012	1.000*
	No. of mulberry trees	-.022	.009	6.142	.013	.978*
	Experience	.099	.045	4.853	.028	1.104*
	Training acquired	-3.025	1.418	4.552	.033	20.599*
	Type of Rearing House	1.369	.546	6.278	.012	3.930*
Training of mulberry plants	Constant	47.419	4.151E4	.000	.999	3.927E20
	No. of mulberry trees	-.080	.014	33.649	.000	.923**
Pruning of mulberry trees	Constant	-2.687	2.911	.852	.356	.068
	Education	.226	.066	11.558	.001	1.253**
	No. of mulberry tree	.036	.010	14.180	.000	1.037**
FYM application	Constant	79.314	4.557E4	.000	.999	2.790E34
	No. of mulberry tree	-.012	.003	12.146	.000	.988**
Fertilizers application	Constant	72.800	4.593E4	.000	.999	4.137E31
	No. of mulberry tree	-.014	.004	13.306	.000	.986**
	Annual Income	.000	.000	4.447	.035	1.000*
Instar-wise mulberry leaf selection	Constant	-42.070	4.610E4	.000	.999	.000
	Age	-.036	.018	4.086	.043	.965*
	No. of mulberry tree	-.009	.003	10.867	.001	.991**
Feeding frequency during late age rearing	Constant	-.299	3.153	.009	.925	.742
	Occupation	-.492	.225	4.763	.029	.612*
Care during moult	Constant	-.023	2.822	.000	.993	.977
	Rearing Kit	1.241	.388	10.218	.001	3.461**
Hygiene measures during rearing	Constant	40.474	4.107E4	.000	.999	3.780E17
	Occupation	1.218	.273	19.900	.000	3.381**
	Annual Income	.000	.000	7.683	.006	1.000**
	No. of mulberry tree	-.008	.003	6.258	.012	.992*
	Type of rearing house	-.594	.198	8.947	.003	.552**
Proper disposal of silkworm rearing waste	Constant	41.015	4.029E4	.000	.999	6.496E17
	Occupation	1.115	.263	18.003	.000	3.051**
	Annual Income	.000	.000	5.713	.017	1.000*
	No. of mulberry tree	-.011	.004	8.171	.004	.989**
	Rearing kit	-.857	.370	5.373	.020	.424*
	Type of house	-.644	.192	11.217	.001	.525**

(** and * refers significance level at 1% and 5%)

*Corresponding author: chanderardhana123@gmail.com

main silk production districts are Anantnag, Kupwara, Pulwama, Baramulla, Gandarbal, Udhampur, Rajouri, Kathua and Reasi. The gap between potential and actual yield obtained by silkworm rearers are not fully exploited. Keeping in view, socio-economic profile of silkworm rearers and deviations in adoption of recommended package of practices were identified to know the factors influencing same in three potential areas of Jammu province.

The data on age, occupation, experience, education, land holding, type of area, area under mulberry plantation, type of rearing house, possession of rearing appliances, training on sericulture improved practices and net annual income and adoption of improved sericulture practices with respect to mulberry and silkworm rearing were collected from randomly selected 225 sericulturists from three major cocoon-producing districts, viz. Kathua, Udhampur and Rajouri. A well-designed pre-tested questionnaire was used for collection of primary data from silkworm rearers. The data were statistically analysed using SPSS software with techniques, viz. percentage, Chi-square method and binary logistic regression model was employed for studying the effect of variables on decision making of adoption of recommended package of practices and Nagelkerke's R^2 values were used to measure variations due to predictors. Secondary data were obtained from different government reports available offline as well as online.

The results of binary logistic regression model (Table 1) indicated that out of all independent variables, number of mulberry trees owned by respondents was most influencing factor which significantly affected

farmer decision to adopt training, pruning, FYM and fertilizer application, instar-wise leaf selection, hygiene measures during rearing and proper disposal of silkworm rearing. The results are almost in accordance with Lakshmanan *et al.* (2011), Sreenivasa and Hiriyanna (2014) and Sharma *et al.* (2019 and 2020). Thus, it is concluded that mulberry plantation with quality leaf was the most influencing factor for adoption of sericulture which ultimately affects the successful cocoon crop production. The possession of rearing kits, type of rearing houses, trainings so received were other factors.

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