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## Personal and socio-economic status of sericulture farmers in Krishnarajpet taluk of Mandya district

R Ajay Kumar, HT Megha, S Shreyas, B Sannappa and KG Manjunath

### Abstract

Sericulture is an agrarian small-scale industry suits to both marginal and small land holders and fetches high returns and creates employment to family members. The studies conducted earlier inferred that personal and socio-economic status of silkworm cocoon producers contribute greatly to the knowledge and adoption levels of mulberry and cocoon production practices. In this context, a study has been conducted in Krishnarajpet taluk of Mandya district of Karnataka state, India to know the personal and socio-economic status of sericulture farmers. Information pertaining to the current investigation was collected from 50 farmers in seven villages through formal discussion using interview schedule. The study revealed that majority of the respondent farmers had small family size and very few farmers possess medium family size. Majority of the farmers had primary and high school level of education and very few farmers had college level of education. In respect of mulberry land holding, large group of farmers holds less than one acre and very few farmers own more than two acres of land. Notably, majority of the farmers did not evince interest in social activities, of which only few farmers were actively involved in milk cooperative societies and mahila mandal. In respect of taking part in extension activities, large chunk of farmers took part in meetings, field visits, farmers training, demonstration, exhibitions, field days and educational tours.

**Keywords:** Adoption level, extension activities, knowledge level, personal and socio-economic status

### Introduction

In the world, India has the unique distinction of being the only country that produces all the four known commercial types of silks viz., mulberry, tasar, eri and muga. India is the second largest producer of silk in the world. The total raw silk production in India is 35,468MT and the production of mulberry, eri, tasar and muga silks accounts for 25,344 (71.45%), 6,910 (19.48%), 2,981 (8.40%) and 233 MT (0.65%), respectively (Anonymous, 2019).

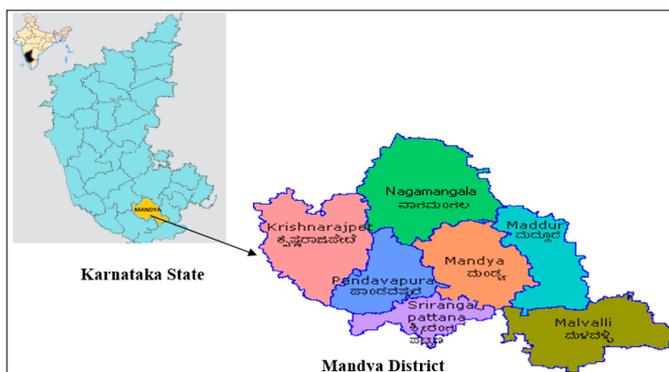
Sericulture is an important means for the socio-economic development of the rural sector. It is highly labour intensive, profit oriented, low input, indoor activity that gives frequent periodicity of economic returns. It also well suits for the women folk of rural sector. Sericulture is an agro based industry excellence with its agricultural base, industrial super structure and labour intensive nature. Considering the socio-economic and ecological back drop of the Karnataka state, sericulture is conceived to be excellent economic support to the farmers especially those having marginal and medium level land holdings. It provides gainful employment and periodical income besides bringing significant change both in social and economic spheres of the rural and semi-urban areas and avoiding the migration of rural force to urban areas.

The socio-economic status of the farmers has been an important parameter in determining their level of technology adoption. This has been adjudged by various field studies involving parameters like caste, family form, main occupation, experience, family size, cocoon yield/100 DFLs, income, education, land holding size, mulberry under irrigation and extension support (Geetha *et al.*, 2001) [2]. The factors such as education, income and social participation, extension contact, mass media use, cosmopolitanism and risk orientation were found to have positive relationship with adoption, while age showed negative relationship with it. The contribution of education and cosmopolitanism was significant too (Sunildutt and Chole, 2002) [8].

The trained and untrained sericulturists differed only in their economic status, experience in sericulture and urban contact. However, non-significant difference existed between trained and untrained sericulturists with respect to age, education, family size, annual income, social participation, contact with extension agency and media participation (Thangaraju, 1979) [10]. Syed Shakir Ali *et al.* (2014) [9] opined that cluster promotion programme (CPP) has created significant impact on all the socio-economic aspects of sericulturists; hence development of sericulture can be hastened up with the adoption of cluster concepts. Even though sericulture is considered to be one of the important agricultural activities, the measurement of economic returns and the relative contribution of various inputs in the cocoon production system play a major role in determining the cost of cocoon production. The pace of adoption of an innovation and consequent diffusion on a large scale is an essential feature of sericultural development. The adoption of innovations at an accelerated pace by large number of farmers is essentially a social process conditioned by variety of factors within and outside the social system concerned.

### Methodology

**Details of study area:** The investigation has been conducted in Mandya district of Karnataka state, India. Karnataka state has 70,958 ha of mulberry of which the crop occupies 15,472.30 acres in Mandya district. The district has seven taluks with a total geographical area of 4,98,244 ha. It is located between north latitude 12° 13' to 13° 04' N and east longitude 76° 19' to 77° 20' E and comprises of 299 villages, out of which 115 village practicing the sericulture with an area of 298.34 ha of mulberry area with a cocoon production of 136.231 MT with a value of silk produced is 401.88 lakhs (2017-18). The villages selected for the present investigation are Arebuvanahalli, Hariharapura, M. Kopl, Ballekere, Kamanahalli, Appanahalli, Nargonahalli taluks of Krishnarajpet. The study was formulated based on the preliminary field survey and in consultation with Technical Staff of the State Department of Sericulture in Krishnarajpet taluk of the Mandya district.



### Source and method of data collection

Information on the personal and socio-economic characteristics among the sericulture farmers was collected through formal discussion using pre-structured interview schedule.

### Personal and socio-economic characteristics of farmers

**Age:** The actual number of years completed by an individual respondent at the time of study was considered.

Based on the available data, the data were classified into three groups namely young, middle and old age.

**Education:** The respondents were asked to indicate their formal education, which was recorded and quantified.

**Social participation:** The involvement of an individual in formal organizations (Village panchayath, Taluk panchayath, Zilla panchayath, Youth club, Mahila Mandal, Primary Co-operative Agriculture and Rural Development Bank, Milk Produces Co-operative Society, Sericulture club, others) were observed with two criteria namely type of membership (*i.e.*, either a member or an office bearer) and duration of membership using frequencies.

**Extension participation:** It was measured in terms of the extent of involvement in the activities like Meetings, Farmers trainings, Field days, Field visits, Demonstrations, Educational tours and Exhibitions conducted by the different developmental departments. The respondent's participation in the above extension activities for the period of study was included as extension participation.

### Analysis of data

The analysis of data was carried out adopting the statistical tools like frequencies, percentages and mean. The following analytical tools were employed using SPSS package.

### Results and Discussion

#### Age

The farmers of study area were categorized into three groups based on their age *viz.*, young (25-40 years), middle (40-55 years) and old age (above 55 years). Majority of the farmers who come under middle age group category (n=30, 60.00%) followed by old age (n=14, 28.00%) and few farmers under young age category (n=6, 12.00%) (Fig.1). It can be presumed that, perception of farmers in knowing about the latest technologies in mulberry and cocoon production practices for higher productivity might hinder as majority of the farmers in the current study belong to middle and old age groups. Sunildutt and Chole (2002) [8] in their study reported that 61.25% of sericulturists belong to young age category followed by middle (28.75%) and old categories (10.00%). The current results are in corroboration with the findings of Sannappa *et al.* (2017b) [7], where maximum farmers (72%) belonged to old age group when compared to middle (26%) and young age (2%). Majority (66.25%) of the respondents were young age up to 35 years, followed by 26.25% of sericulturists were in middle age group (36 to 55 years) and only 7.50% were in the old age group (>56 years) (Rajeshwar *et al.*, 2019) [4].

#### Education level

Education level of farmers in the study area was categorized as illiterate, primary (1<sup>st</sup>-7<sup>th</sup> Std.), high school (8<sup>th</sup>-10<sup>th</sup> Std.) and college education (11<sup>th</sup> Std. and above). Majority of the farmers possess primary and high school education with respect to all the categories of farmers and altogether 16 farmers (32.00%) in the study area belong to primary and high school education, while 13 farmers (26.00%) belong to illiterate category. However, very few farmers (n=5, 10.00%) had college level of education (Fig. 2). The current results were similar to the findings of Manju (1997) [3] who found that 36.66% of farmers were illiterate and 45%

studied upto primary to middle school and 17.5% studied upto high school level. According to Sunildutt and Chole (2002) [8], 26.25% of sericulturists were illiterate, 27.50% had primary, 3.32% had middle school, 8.75% had higher secondary and 6.25% had college level of education. Sannappa *et al.* (2017a) [6] reported that level of education varied among the sericulturists in Malavalli Taluk of Mandya District considerably, of the 50 respondents, majority of the farmers belong to illiterate group (38%) followed by middle school (5-10<sup>th</sup> standard) (30%), secondary school (11-12<sup>th</sup> standard) (18%), primary school (1-4<sup>th</sup> standard) (10%) and only 4% of farmers are degree holders. In an another study conducted by Sannappa *et al.* (2017b) [7] in Maddur taluk of Mandya district with a sample farmers of 50 farmers revealed that 24 farmers (48%) belonged to illiterate group, while 18 farmers (36%) comes under a group of 5-10<sup>th</sup> standard, followed by 4 farmers (8%) each belong to primary (1-4<sup>th</sup> standard) and secondary education (11-12<sup>th</sup> standard).

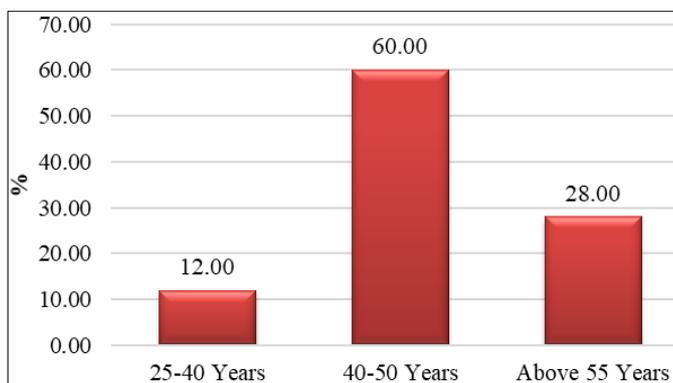


Fig 1: Age of sericulture farmers

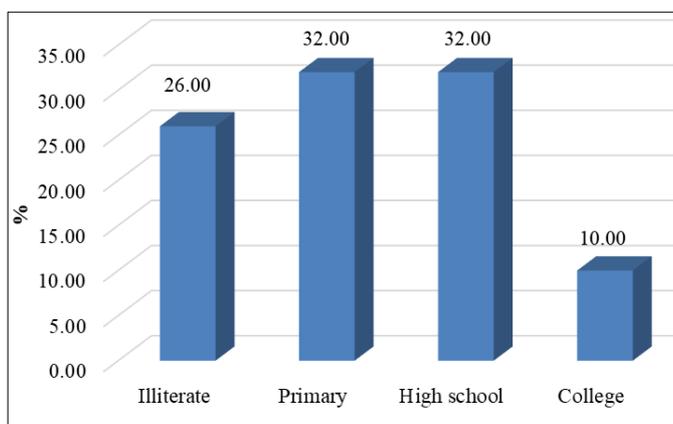


Fig 2: Education level of sericulture farmers

**Family size**

Family size of farmers in the study area were grouped under three categories namely small (<2 members), medium (3-4 members) and big (>5 members). Majority of the respondent farmers possess small family size (n=33, 66.00%) and few farmers possess medium family size (n=9, 18.00%) and few farmers holds big family (n=8, 16.00%). The findings of the current investigation were also supported by the results of Sannappa *et al.* (2017a) [6] who conducted a study in Malavalli taluk of Mandya district among sericulture farmers (n=50), where majority of the respondents (48.00%) are having medium family size (4-6 members), 32.00% of farmers represent small family size (< 4 members) and 20%

of farmers holding big family (> 6 members) (Fig. 3). Similarly, in an another study undertaken by Sannappa *et al.* (2017b) [7] in Maddur taluk of Mandya district inferred that majority (28) of the respondents (56%) had medium family size (4-6 members), 17 respondents (34%) had small family size (< 4 members) and 5 respondents (10%) are having big family size (>6). Under irrigated condition of Chamarajanagar district, medium family size was registered with small (n=7, 58.33%), medium (n=46, 61.33%) and total category of farmers (n=66, 55.00%) and big family with big farmers (n=20, 60.61%). Further, big family size was less among small farmers (n=5, 41.67%) and small family among medium (n=3, 4.00%) and total category of farmers (n=3, 2.50%). Further, it was observed that both small and big farmers did not have small family size (Raju, 2018) [5].

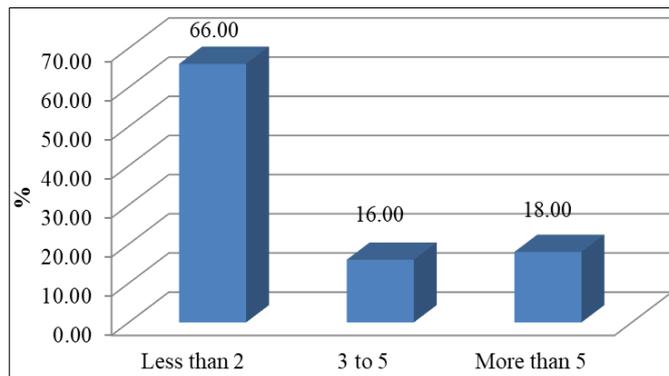


Fig 3: Family size of sericulture farmers

**Mulberry land holding**

Mulberry land holdings were categorized into less than one acre (<1), 1-2 acres and more than 2 acres (>2). More number of farmers had less than one acre (n=30, 60.00%) of mulberry land holdings and 12 farmers (24.00%) with 1-2 acre and few farmers had more than 2 acres of land holding (n=8, 16.00%) (Fig. 4). The area under mulberry revealed that 55.00% of respondents were having moderate area under mulberry cultivation *i.e.* 0.31 to 0.4 hectare and 30.00% of the respondents were having large area under mulberry *i.e.* 0.41 hectare and above and only 15.00% of the respondents were having less area under mulberry *i.e.* up to 0.3 hectare in Aurangabad district of Marathwada region (Rajeshwar *et al.*, 2019) [4].

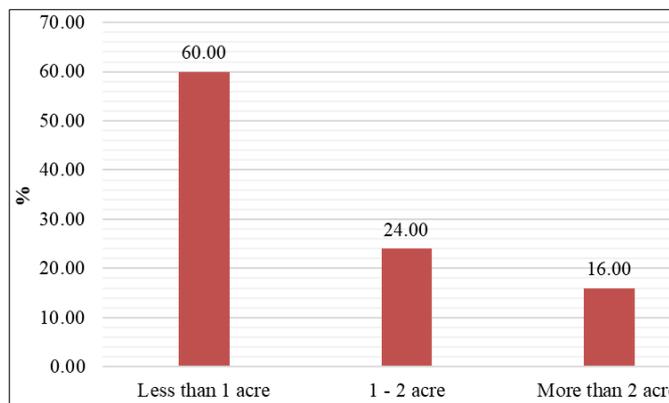


Fig 4: Mulberry land holding of sericulture farmers

**Social participation**

Participation of farmers in social activities in the study area was categorized as Village panchayath, Taluk panchayath,

Zilla panchayath, Youth club, Mahila mandal, Co-operative agriculture bank, Milk co-operative society, Sericulture club and others. Large group of farmers did not evince interest in social activities, however only few farmers were actively involved in Milk cooperative societies (n=3, 6.00%) and Mahila mandal (n=1, 2.00%) (Fig.5). In this regard, concerted efforts must be undertaken by the extension personnel, NGOs and other local bodies to create awareness among the farmers about the usefulness / benefits of these social organizations for the betterment of farmers knowledge level and social status of farmers.

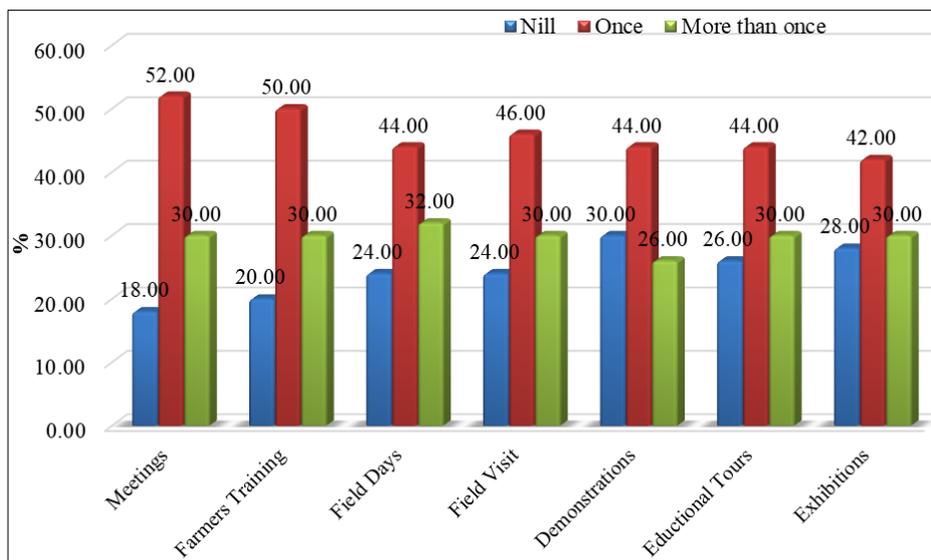
Under irrigated condition in Chamarajanagar district, farmers showed less interest in social activities. The trend was similar for irrigated condition and none of the small farmers showed interest towards participation in social activities (Raju, 2018) [5].

**Extension participation**

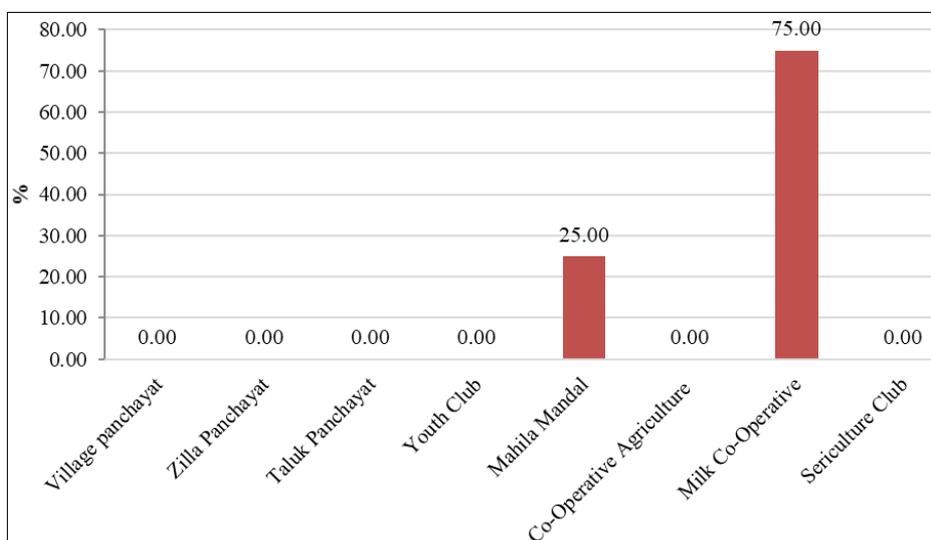
Participation of farmers in the extension activities of the study area includes Meetings, Farmers trainings, Field days, Field visits, Demonstrations, Educational tours and Exhibitions and their involvement were categorized into Nil, Once and More than once. Majority of the farmers involve once in a while and few farmers were participated more than

once in extension activities. The majority of farmers involve once in a while in extension activities i.e., Meetings (n=26, 52.00%), Farmers training (n=25, 50.00%), Field visit (n=23, 46.00%), Field days, Demonstration and Educational tour (n=22, 44.00%) and Exhibition (n=21, 42.00%). The farmers involve more than once in extension activities i.e., Field days (n=16, 32.00%), Meetings, Farmers training, Field visit, Educational tour and Exhibition (n=15, 30.00%) and Demonstration (n=13, 26.00%) respectively. The farmers who involve in extension activities includes Demonstration (n=15, 30.00%), Exhibition (n=14, 28.00%), Educational tours (n=13, 26.00%), Field days and Field visit (n=12, 24.00%), Farmers training (n=10, 20.00%) and Meetings (n=9, 18.00%) (Fig.6).

According to Raju (2018) [5], 82.50, 72.50, 65.00, 64.17, 50.83, 43.33 and 42.50% of farmers under irrigated condition did not involve in Demonstrations, Meetings, Field days, Educational tours, Farmers trainings, Exhibitions and Field visits, respectively. About 50.83% of farmers participated in Field visits and Exhibitions and 45.00% of farmers participated in Farmers trainings for once. However, 15.83% of farmers participated in Field days for more than once.



**Fig 5:** Extension participation of sericulture farmers



**Fig 6:** Social participation of sericulture farmers

## Conclusion

Overall, it can be inferred that, majority of the farmers belong to middle age group (60.00%) studied upto primary and high school level (32.00%) possess small family size (60.00%) owns less than one acre (60.00%) of mulberry land holdings, did not evince interest in social activities and involve once in a while in extension activities.

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