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A Profile of Personal and Socio-economic Characteristics of Sericulture Farmers in Malavalli Taluk, Mandya District, Karnataka

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Abstract— *Sericulture is an agrarian small-scale industry suited to marginal and small land holders, providing high returns and creating employment for family members. Studies indicate that the personal and socio-economic status of farmers significantly influences the adoption of improved sericulture practices. This study aimed to profile these characteristics among sericulture farmers in Malavalli taluk of Mandya district, Karnataka, India. Data were collected from 50 farmers across seven villages using a structured interview schedule. Results revealed that the majority of respondents were of middle age (60%), possessed primary or high school education (32%), had small family sizes (66%), and cultivated mulberry on less than one acre of land (60%). A significant proportion showed low involvement in social organizations, though limited participation was noted in milk cooperatives and mahila mandals. Conversely, a majority participated in at least one extension activity such as meetings, field visits, and training programs. The findings provide a baseline for understanding the farmer community and tailoring inclusive extension strategies to enhance technology adoption and socio-economic resilience in sericulture.*

Keywords— Socio-economic profile, sericulture farmers, land holding, extension participation, Karnataka.

I. INTRODUCTION

India holds a unique position as the only country producing all four commercial types of silk: mulberry, tasar, eri, and muga. It is the world's second-largest silk producer, with a total raw silk production of 41,121 MT. Mulberry silk alone accounts for 31,119 MT (75.67%) of this output (Anonymous, 2025). Sericulture is a vital sector for socio-economic development in rural areas. It is labour-intensive, profitable, requires low initial investment, and ensures frequent income, making it particularly suitable for rural women. With its agricultural base and industrial structure, sericulture serves as an excellent economic activity for farmers with marginal to medium land holdings in Karnataka, providing gainful employment, periodic income, and curbing rural-to-urban migration.

The socio-economic status of farmers is a well-established determinant of technology adoption. Studies have identified factors such as education, income, social participation, extension contact, and land holding as influential variables (Geetha et al., 2001). Sunildutt and Chole (2002) reported a positive relationship between adoption and factors like education and social participation, while age often shows a negative correlation. The impact of training is also notable; while trained and untrained

farmers may differ in economic status and experience, other factors like age and family size may show no significant difference (Thangaraju, 1979). Furthermore, cluster-based approaches have been shown to enhance socio-economic outcomes significantly (Syed Shakir Ali et al., 2014).

Despite its importance, localized and current profiles of sericulture farmers are essential for formulating effective development strategies. Most existing studies in the region are dated or focus on broader districts. A detailed micro-level profile is necessary to understand the present-day demographic and socio-economic context, which directly influences the pace of innovation adoption. This study, therefore, aimed to: (1) document the personal and socio-economic characteristics of sericulture farmers in Malavalli taluk, and (2) analyze their level of participation in social and extension activities. The findings are intended to inform targeted policy and extension interventions for sustainable sericulture development.

II. METHODOLOGY

2.1 Study Area:

The study was conducted in Malavalli taluk of Mandya district, Karnataka. Mandya district comprises seven taluks with a total geographical area of 4,98,244 hectares. The district has 299 villages, of which 115 practice sericulture, utilizing 298.34 hectares for mulberry cultivation and producing approximately 239.231 MT of cocoons valued at ₹601.88 lakhs (2024-25). Malavalli taluk is a significant sericulture zone within the district.

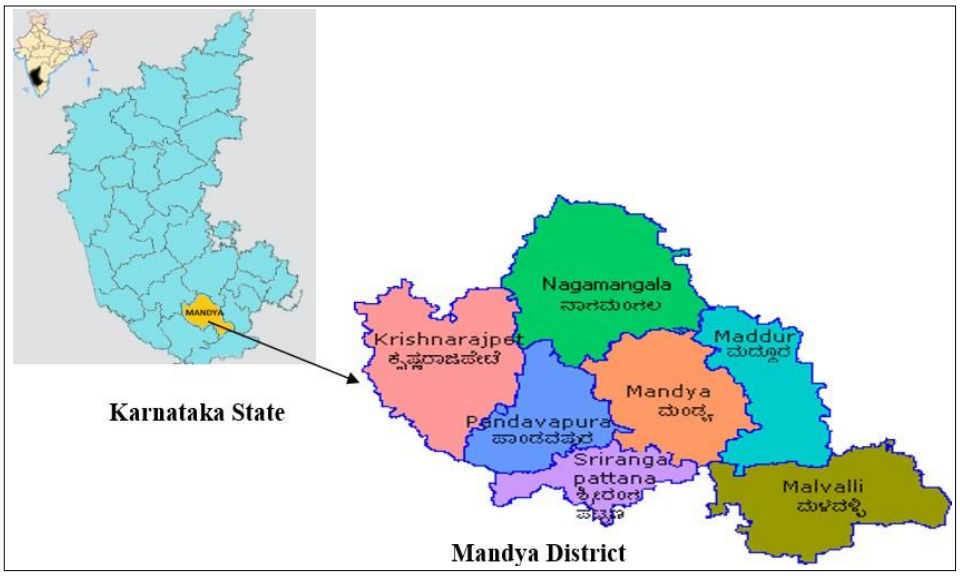

FIGURE 1: Details of study area

2.2 Sampling and Data Collection:

A purposive sampling method was employed to select seven villages known for active sericulture: Kundur, Halaguru, Belakavadi, D.C. Pura, T.K. Halli, and Gowdagere. From these villages, 50 sericulture farmers were selected based on their engagement in mulberry cultivation and silkworm rearing, in consultation with local officials from the State Department of Sericulture.

Primary data were collected through face-to-face interviews using a pre-tested, structured schedule. The schedule was designed to capture information on personal characteristics (age, education, family size) and socio-economic variables (mulberry land holding, social participation, extension participation).

2.3 Variables and Measurement:

- **Age:** Categorized as young (25-40 years), middle (41-55 years), and old (>55 years).
- **Education:** Classified as illiterate, primary (1st-7th standard), high school (8th-10th standard), and college (11th standard and above).
- **Family Size:** Grouped as small (≤4 members), medium (5-6 members), and large (>6 members).
- **Mulberry Land Holding:** Categorized as <1 acre, 1-2 acres, and >2 acres.

- **Social Participation:** Assessed through membership in formal organizations (e.g., Village Panchayat, Milk Cooperative, Mahila Mandal).
- **Extension Participation:** Measured by involvement in activities like meetings, training, field days, and demonstrations conducted by development departments over the previous year.

2.4 Data Analysis:

Collected data were analyzed using descriptive statistics—frequencies and percentages—with the assistance of SPSS software. Results are presented in tabular and graphical forms.

III. RESULTS AND DISCUSSION

3.1 Age Distribution of Farmers:

The age profile of respondents indicated that a majority (60%, n=30) belonged to the middle-age group (41-55 years), followed by the old-age group (28%, n=14), and young farmers (12%, n=6) as shown in figure 2. This suggests a predominantly mature farming community, which may influence the pace of adopting new technologies, as older farmers can be more risk-averse. This finding aligns with Sannappa et al. (2017b) but contrasts with Sunildutt and Chole (2002), who reported a younger demographic. An aging farmer population poses a challenge for the long-term sustainability of sericulture unless youth engagement is encouraged.

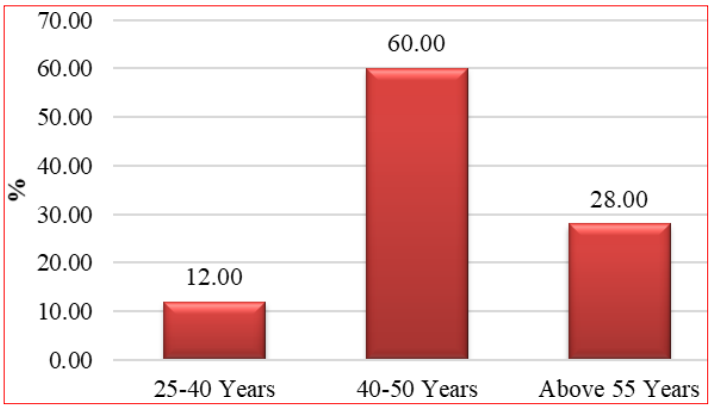

FIGURE 2: Age distribution of sericulture farmers in Malavalli taluk.

3.2 Education Level:

Education is a critical factor in technology adoption. In the study area, 26% (n=13) of farmers were illiterate, while the largest segment (32%, n=16) had attained primary to high school education. Only 10% (n=5) had college-level education as shown in figure 3. This educational profile is consistent with earlier studies in the region (Manju, 1997; Sannappa et al., 2017a) and highlights a need for extension materials and training that are visual, practical, and tailored to low-literacy audiences.

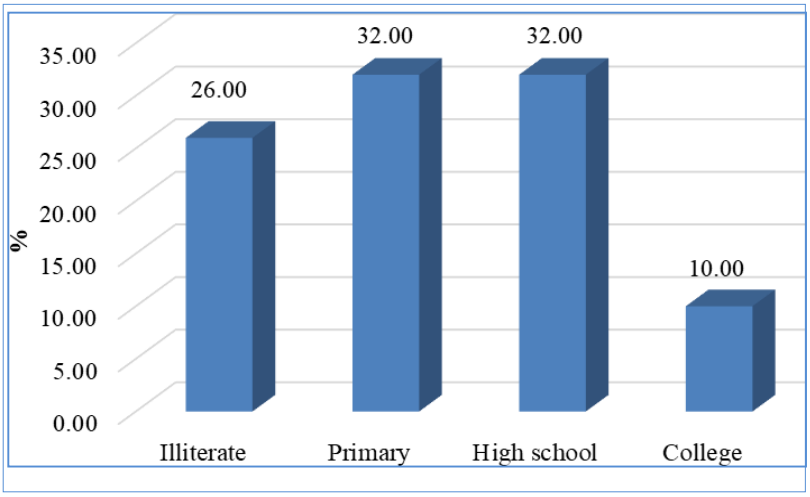

FIGURE 3: Education level of sericulture farmers in Malavalli taluk.

3.3 Family Size:

Most respondents (66%, n=33) had a small family size (≤4 members), with 18% (n=9) and 16% (n=8) having medium and large families, respectively as shown in figure 4. Smaller family sizes may imply limited family labour availability, which is a crucial input in labour-intensive sericulture. This trend contrasts with some earlier studies (Sannappa et al., 2017a) that reported a higher proportion of medium-sized families, possibly indicating a demographic shift toward nuclear families.

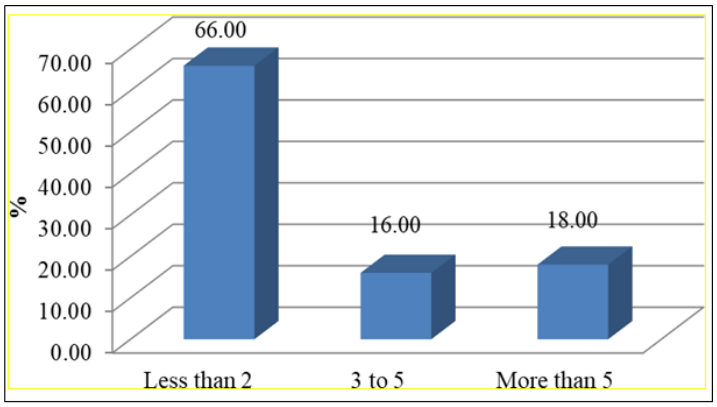

FIGURE 4: Family size distribution of sericulture farmers in Malavalli taluk.

3.4 Mulberry Land Holding:

Landholding is a key economic indicator. A significant 60% (n=30) of farmers cultivated mulberry on less than one acre, confirming the small-scale nature of sericulture in the region. Another 24% (n=12) held 1-2 acres, and only 16% (n=8) had more than two acres as shown in figure 5. This fragmentation underscores the importance of technologies and practices that maximize productivity per unit area to ensure economic viability for smallholders.

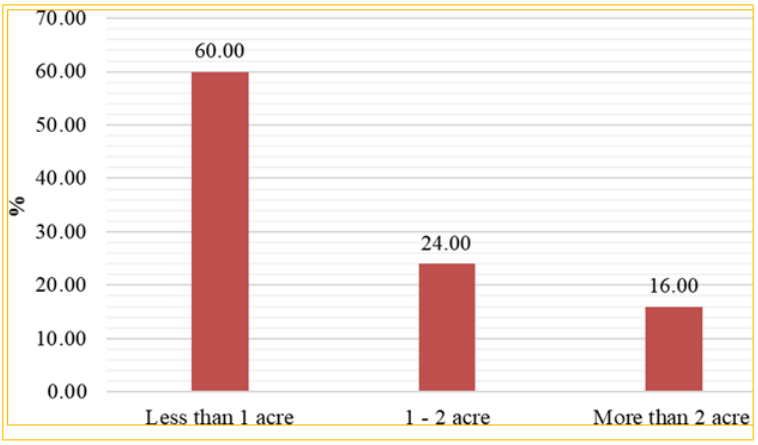

FIGURE 5: Mulberry land holding pattern among sericulture farmers in Malavalli taluk.

3.5 Social Participation:

Social participation was assessed by examining membership in formal organizations, including Village Panchayat, Taluk Panchayat, Zilla Panchayat, Youth Clubs, Mahila Mandals, Cooperative Agriculture Banks, Milk Cooperative Societies, and Sericulture Clubs.

The findings revealed a widespread lack of engagement. A large majority of farmers did not evince interest in any social activities. Active involvement was minimal and confined to only a few organizations: a small number of farmers were members of Milk Cooperative Societies (n=3, 6.00%) and Mahila Mandals (n=1, 2.00%). No participation was recorded in other listed institutions (Fig. 5). This low level of social capital limits opportunities for collective learning, resource sharing, and accessing institutional support. The trend aligns with observations from irrigated areas in Mandya district, where farmers showed similarly low interest, and notably, no small farmers participated in social activities (Raju, 2018). Consequently, concerted efforts by extension personnel, NGOs, and local bodies are needed to raise awareness about the benefits of social organizations for enhancing knowledge and socio-economic status.

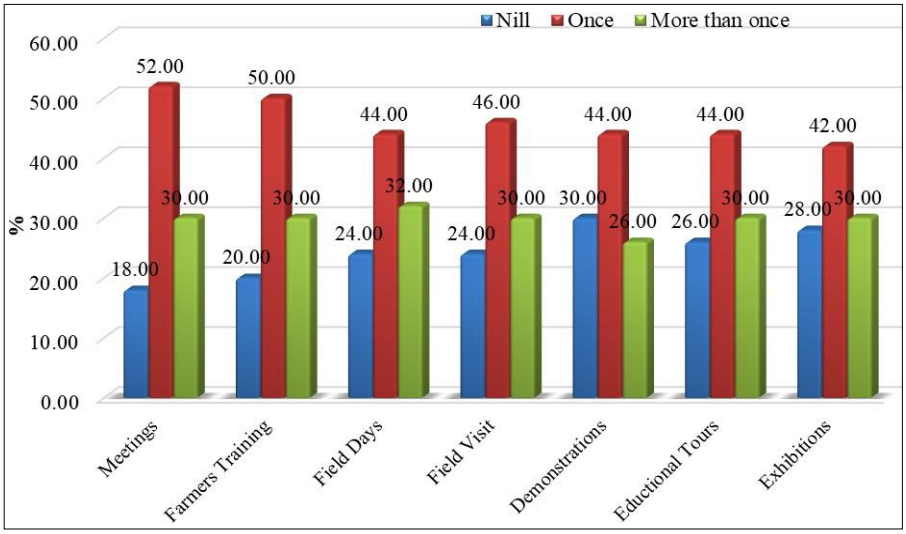

FIGURE 6: Social participation patterns of sericulture farmers in Malavalli taluk.

3.6 Extension Participation:

Farmers' involvement in extension activities was measured across seven categories: Meetings, Farmers Trainings, Field Days, Field Visits, Demonstrations, Educational Tours, and Exhibitions. Participation was categorized as 'Nil,' 'Once,' or 'More than once' during the study period.

The data indicate that while a majority of farmers participated in at least one extension activity, the frequency was typically low. For participation '**Once**', the rates were: Meetings (52.00%, n=26), Farmers Training (50.00%, n=25), Field Visits (46.00%, n=23), Field Days (44.00%, n=22), Demonstrations (44.00%, n=22), Educational Tours (44.00%, n=22), and Exhibitions (42.00%, n=21).

Participation '**More than once**' was less common: Field Days (32.00%, n=16); Meetings, Farmers Training, Field Visits, Educational Tours, and Exhibitions (30.00% each, n=15); and Demonstrations (26.00%, n=13).

Conversely, a significant proportion abstained from certain activities altogether: Demonstrations (30.00%, n=15 did not participate), Exhibitions (28.00%, n=14), Educational Tours (26.00%, n=13), Field Days and Field Visits (24.00% each, n=12), Farmers Training (20.00%, n=10), and Meetings (18.00%, n=9) (Fig. 6).

This pattern of moderate, often single-attendance engagement contrasts with a more disengaged pattern reported by Raju (2018) in irrigated conditions, where non-participation rates were higher: Demonstrations (82.50%), Meetings (72.50%), Field Days (65.00%), Educational Tours (64.17%), Farmers Trainings (50.83%), Exhibitions (43.33%), and Field Visits (42.50%). In that study, a higher proportion participated only 'Once' in Field Visits and Exhibitions (50.83%) and Farmers Trainings (45.00%), while only 15.83% participated 'More than once' in Field Days

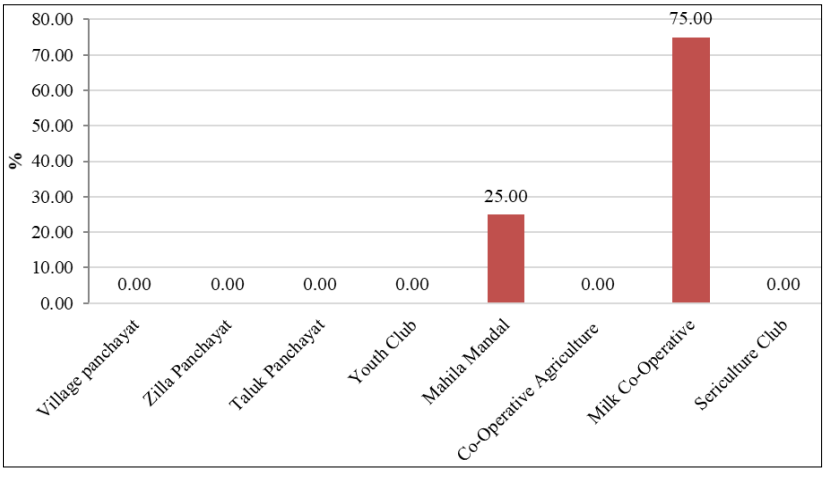

FIGURE 7: Extension participation patterns of sericulture farmers in Malavalli taluk.

IV. CONCLUSION AND IMPLICATIONS

This study profiles the sericulture farmers of Malavalli taluk as predominantly middle-aged, with basic education, small landholdings, and small family sizes. Their limited social capital, juxtaposed with moderate engagement in extension activities, presents a clear avenue for intervention.

The findings have direct implications for extension policy and practice:

1. **Tailored Extension:** Extension programs should be designed considering the average education level and age of farmers, emphasizing hands-on, visual, and practical demonstrations over text-heavy materials.
2. **Focus on Smallholders:** Research and development should prioritize space- and labour-efficient technologies that enhance productivity on small plots of land.
3. **Promoting Collectives:** There is a critical need to promote and revitalize farmer organizations, including sericulture clubs and cooperatives. These can serve as platforms for knowledge sharing, input procurement, and marketing, thereby enhancing social participation and economic bargaining power.
4. **Engaging Youth:** To ensure sustainability, schemes and training programs specifically targeting the younger rural population should be developed to attract them to sericulture.

In conclusion, while sericulture remains a vital livelihood in Malavalli, its future growth depends on strategically addressing the socio-economic constraints identified in this profile. A focused, farmer-centric approach integrating technology dissemination with institutional building is recommended.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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