CHAPTER V

SUMMARY AND CONCLUSION

This chapter provides brief information on the systematized efforts undertaken for the empirical study with a focus on the emerged findings. It includes summary of the findings, implications of the study and suggestions for further research. The arrangement of this chapter goes with the following headings;

5.1 Objectives of the study

5.2 Research methodology

5.3 Research findings

5.4 Implication and conclusion of the study

5.5 Scope for further research

5.1 Objectives of the study

The economy of the most of the developing countries mainly depends on agriculture and allied sector *i.e.*, sericulture with 8.7 million employment generation through sericulture industry and contributing 2.72 per cent to the country's GDP. Sericulture is a major cottage industry in both Assam and Karnataka states comprising of mulberry silkworm rearing in Karnataka and in Assam both mulberry and non-mulberry silkworm rearing and production of its natural silks. Even in uncertain environmental conditions and climatic changes, silkworm rearers provide the keystone for silk production, fabric production and support to the economy. Despite the reality, the sericulture farming community still lives in uncertain conditions. This situation is emphasized by lack of knowledge about the scientific rearing practices, non-availability of inputs in-time, price fluctuations in the market, more domination of middlemen in the market, and lack of knowledge on disinfectant measures. Through well planned approaches, India has reached the milestone of being the second largest producer of the silk in the world. The production has been increased by effective dissemination of the latest technologies at the field level. The challenge under Indian conditions has been more about the dissemination and rate of adoption of new sericultural technologies by the silkworm rearers.

A sericultural extension system plays a crucial role in providing advisory supportive service to the silkworm rearers for producing and earning polite livelihoods for themselves and their families as well as to satisfy their needs in a timely and effective manner by informing, motivating and educating the silkworm rearers about the available latest technological and marketing information. With the better understanding of these core issues will boost the future extension programmes and delivery system. Hence, the present study was conducted and entitled with extent of farmers' satisfaction from Sericultural Extension Services: A Comparative Study among the Silkworm rearers of Assam and Karnataka states with the following objectives;

1. To find out the profile characteristics of the silkworm
2. To analyse the level of satisfaction of silkworm rearers from sericultural extension services.
3. To identify the problems and difficulties faced by the silkworm rearers to adopt improved technologies of silkworm rearing practices recommended by the State Department of Sericulture.

5.2 Research methodology

The investigation was taken in the Lakhimpur district of Assam state and Chikkaballapur district of Karnataka state. One district was selected randomly from each state of Assam and Karnataka states. In case of Assam state, three development blocks were selected from the Lakhimpur district purposively. Similarly, in Karnataka state three talukas were selected from Chikkaballapur district purposively. From each development blocks two villages were selected from both the states of Assam and Karnataka. From each village 10 respondents were selected from the both the state of Assam and Karnataka. A total of 120 respondents were selected for the study, 60 each from the state of Assam and Karnataka by following the random sampling technique and the data was collected.

5.3 Research findings

5.3.1 Profile characteristics of the silkworm rearers of Assam and Karnataka states

The study revealed that majority of the silkworm rearers of Assam and Karnataka states belonged to middle age category (35-50 years) *i.e.*, 41.66 per cent and 51.66 per cent respectively. In case of educational level, higher proportion of the respondents had high school level of education in Assam (35.00 %) than in Karnataka

(31.66 %). For farming experience, majority of the silkworm rearers had medium farm experience between 10-25 years (Assam: 75.00 %, Karnataka: 40.00 %). In case of family size, majority of the silkworm rearers belonged to the medium family having 4-6 members in the family (Assam: 63.33 %, Karnataka: 76.66 %). For labour availability within the households, majority of the respondents of Assam and Karnataka states had medium labour availability within the household (4-6 members) *i.e*., 66.66 per cent and 81.66 per cent respectively. In case of annual family income, majority of the silkworm rearers of Assam and Karnataka states had medium level of annual family income *i.e*., 63.33 per cent and 58.33 per cent respectively. For operational land holding, majority of the silkworm rearers (48.33 %) of Assam had up to 1-2 ha while in Karnataka majority of the silkworm rearers (55.00 %) had up to 1-2 ha. In case of farm equipment availability, majority of the silkworm rearers (43.33 %) of Assam and Karnataka (36.66 %) states had medium farm equipment availability. In case of extension contact, it was observed that majority of the silkworm rearers of Assam and Karnataka states had medium extension contact *i.e*., 70 per cent and 78.33 per cent respectively. In case of silkworm rearers in farming organization of Assam, 43.33 per cent were members of farming organization while rest (56.66 %) of the respondents were non-members of the farming organization. In Karnataka, majority (68.33 %) of the respondents were members of the farming organization and rest (31.66 %) of the respondents were non-member of the farming organization. In case of the use of communication channels by the silkworm rearers, majority of the respondents of Assam and Karnataka states had medium level of communication channels used for collecting information *i.e*., 46.66 per cent and 45.00 per cent respectively. In case of training exposure, majority of the silkworm rearers of Assam and Karnataka states had medium level of training exposure (7-14 days) *i.e*., 46.66 per cent and 66.66 per cent respectively. In case of knowledge level of silkworm rearers of Assam and Karnataka states had medium knowledge *i.e*., 60.00 per cent and 61.66 per cent respectively.

5.3.2 Level of satisfaction of the silkworm rearers from sericultural extension services of Assam and Karnataka

In case of satisfaction level of silkworm rearers of Assam and Karnataka, majority of the respondents had medium level of satisfaction from sericultural extension services *i.e*., 68.33 per cent and 75.00 per cent respectively. From the present study it was observed that the difference in the level of satisfaction of silkworm rearers was found to be significant (t=8.887) (p=0.000) between the Assam and Karnataka (Table 4.2 & 4.2.1).

5.3.3 Relationship with the selected profile characteristics and level of satisfaction of silkworm rearers from sericultural extension services of Assam

Among the 13 variables selected for the study, the variables *viz*., communication channels used for collecting information (r=0.336), training exposure (r=0.373), and knowledge level of farmers (r=0.354) were found to have positive correlation with the level of satisfaction of farmers from sericultural extension services and the relationships were found to be significant at the 0.01 level of significance (Table 4.3.1).

The variables age (r=0.328), farming experience (r=0.322), family size (r=0.261), labour availability within the household (r=0.266), annual family income (r=0.294), size of operational land holdings (r=0.265), and extension contact (r=0.285) were found to have positive correlation with level of satisfaction of farmers from sericultural extension services and the relationships were found to be significant at the 0.05 level of significance (Table 4.3.1).

The variable, farm equipment availability was found to have negative correlation (r=-0.179) with level of satisfaction of farmers from sericultural extension services and the relationship was found to be non significant (Table 4.3.1).

For the variables *viz*., educational level (X^2=87.909), and membership in the farming organizations (X^2=26.805), the chi-square tests were administered and it was found to have significant association with level of satisfaction of farmers from sericultural extension services (Table 4.3.2).

5.3.4 Relationship with the selected profile characteristics and level of satisfaction of silkworm rearers from sericultural extension services of Karnataka

Among the 13 variables selected for the study, the variables *viz*., age (r=0.405) and communication channels used for collecting information (r=0.378) were found to have positive correlation with level of satisfaction of farmers from sericultural extension services and the relationship was significant at the 0.01 level of significance (Table 4.3.3).

The variable viz., farming experience (r=0.296), annual family income (r=0.299), size of operational land holding (r=0.272), extension contact (r=0.272), training exposure (r=0.328) and knowledge level of the farmers (r=0.314) were found to have positive correlation with level satisfaction of farmers from sericultural extension services

and the relationships were found to be significant at the 0.05 level of significance (Table 4.3.3).

The variable, family size was found to have positive correlation (r=0.059) with level of satisfaction of farmers from sericultural extension services but the relationship was non-significant (Table 4.3.3).

The remaining independent variables *viz*., labour availability within the household (r=-0.043) and farm equipment availability (r=-0.044) were found to have negative correlation with level of satisfaction of farmers from sericultural extension services (Table 4.3.3).

For the variables *viz*., educational level (X^2=93.100) and membership in the farming organizations(X^2=22.619), the chi-square test was administered and the results revealed the non-significant association of the above two mentioned variables with the level of satisfaction of farmers from sericultural extension services (Table 4.3.4).

5.3.5 Problems and difficulties faced by the silkworm rearers to adopt improved technologies of silkworm rearing practices recommended by the State Department of Sericulture

The study revealed that the major problems faced by the respondents of Assam were observed to be ‘continuous fluctuations in the weather conditions and floods was most expressed by the respondents’ and stood at first position by getting expression from 95.00 per cent of the respondents followed by ‘high labour wages and high input cost’ (93.33 %), ‘lack of adequate transportation facilities to the markets or brought from the distant places’ (80.00 %), and ‘the use of pesticides in the nearby tea gardens is a serious problem for the rearing of MUGA silkworms for their survival’ (76.66 %) (Table 4.4.1.1).

In case of Karnataka, the major problems faced by the respondents were found to be the ‘lack of knowledge regarding control and management practices of uzi fly, ants, and other diseases’ and stood at first position by getting expression from 100.00 per cent of the respondents followed by ‘lack of awareness regarding the concentration of disinfectants in silkworm rearing practices’ (100.00 %), ‘lack of market facilities, fluctuations in the cocoon price, and exploitation of farmers at the market by the middleman’ (98.33 %), and ‘high cost of establishing the scientific rearing house’ (96.66 %) (Table 4.4.1.2).

5.3.6 Suggestions to overcome the constraints in silkworm rearing activities in Assam and Karnataka

There were few major suggestions given by the respondents in case of Assam, 'reduce the input costs and labour wages' was most expressed by the respondents followed by 'reduce the seed cocoon price or give subsidies on seed cocoons', 'provide good quality seed cocoons on time', and 'rear the silkworm according to the climatic condition'.

In case of Karnataka, the major suggestions given by the respondents were 'provide the information about the market price of different markets and reduce the middleman activities' followed by 'provide the information regarding calculation of the concentration of chemicals or disinfectants in silkworm rearing practices', 'provide practical knowledge regarding plant protection and fertilizer application at proper time', and 'government should support the farmers from the department of sericulture by fulfilling their need'.

5.4 Implication and conclusion of the study

1. Majority of the Assam and Karnataka state farmers belonged to middle age category with small size of landholding. Therefore, state department of sericulture should give more emphasis on silkworm rearers for attracting the rural youths to engage in sericultural activities like silkworm rearing, reeling, post reeling activities and also empowering the small and marginal landholding silkworm rearers of the both the states.
2. Majority of the Assam silkworm rearers had medium and low access and availability of farm equipments because of small size of operational landholding, but in Karnataka the silkworm rearers had more access and availability of farm equipments. Therefore, state department of sericulture should create awareness regarding the custom hiring centres, which will enable the small and marginal farmers to take up farm operations on time.
3. Majority of the farmers had medium level of extension contact. Frequency of sericulture extension contact is an important factor for the farmers' satisfaction, implying need to arrange frequent extension contact that enables respondents to develop trust and motivate them to adopt improved practices. Regular field visits

and discussion with farmers should be encouraged. So, to improve satisfaction level of farmers, delivering of clear information by the extension agents was mandatory.

4. Farmers in Assam had a lower membership position in the farming organizations and participation in the farming organizations as compared to the Karnataka farmers. The state department of sericulture and CMER & TI, Central Silk Board (CSB) should initiate the steps to mobilize for their involvement in the formal and informal organizations. Counselling has to be done to explain the farmers about the benefits of having membership or participation in the farming organization.
5. Majority of the Assam farmers had medium and low training exposure than the Karnataka farmers. Hence, state department of sericulture should conduct more number of trainings and focus on diversified technologies and capacity building that suits with specific need of the farmers. And also, follow-up is a very important factor which will make extension officers to provide their services more effectively and passionately.
6. The study revealed that majority of the respondents had medium level of overall farmers satisfaction from sericultural extension services. This means that the sericulture extension programmes still has a lot of room for improvement and government need to pay extra attention especially in Karnataka state.
7. In case of Assam the independent variables *viz*., farming experience, labour availability within the household, family size, annual family income, extension contact, and knowledge level of the farmers had positive and significant correlation with level of satisfaction of farmers from sericultural extension services. Hence, an attempt on improvement of these factors would lead to improvement over the level of satisfaction of the farmers from sericultural extension services.
8. In case of Karnataka the independent variables *viz.*, age, farming experience, annual family income, communication channels used for collecting information, extension contact, and knowledge level of the silkworm rearers had positive and significant influence over level of satisfaction of silkworm rearers from sericultural extension services., therefore, these factors need to be considered to bring any improvement over the satisfaction level of the farmers from sericultural extension services.

9. In the study, the major problems faced by the respondents of Assam and Karnataka states were identified among which, fluctuations in the weather conditions and floods, higher labour wage and input cost, lack of transportation facilities to the market, control and management practices of pests and diseases, lack of awareness about concentration of disinfectants in silkworm rearing, lack of market facilities and fluctuations in the cocoon prices. Immediate involvement by the state department of sericulture and central silk board into the above problems is needed for better livelihood of farmers and also to establish better performance by the sericulture extension officers.

5.5 Scope for the further research

1. The present investigation had limitation of the time and the resources to the investigator. Hence, the study can be taken up with large sample size.
2. The investigation was conducted in Chikkaballapur district of Karnataka and Lakhimpur district of Assam. Similar studies may be taken up in other districts, so that more precise and accurate results can be recorded.
3. The study included only selected independent variables. Further studies maybe conducted by including some more independent variables to probe their impact on dependent variable.
4. Analytical study maybe conducted in terms of performance level of sericultural extension officers using appropriate methods.
5. Role of sericultural extension officers in silk value chain management may also be studied in both the states of Assam and Karnataka.