CHAPTER - VIII

Summary of Findings and Suggestions
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Introduction:

India is a resourceful country, where Agriculture becomes the main occupation of the most of the rural people. Majority of the farmers are resource poor and small land holding. There is needed to uplift them and provide an opportunity to get higher income and employment throughout the year.

Sericulture is one of the activities, which suits the farmers in improving their income level and higher returns compared with other cash crops. Sericulture requires sufficient water for plantation of mulberry and an independent rearing house to rear silkworms. However, rearing of silkworms require special skill and technique, which can be learned by undergoing training. New technologies are developed, require knowledge and application, but surely give higher returns. In addition the farmers need knowledge about the management, finance, marketing, prices prevailing in the market, and many more to run the enterprise successfully, need entrepreneurial quality. Such qualities can be developed by the intervention of the training institutions specially established and support by the government. The study has undertaken with a view to analyze the effectiveness of training programmes and entrepreneurship development in sericulture industry of Belgaum division of Karnataka.
This Chapter contains brief findings of the study and suggestions to improve the sericulture activities.

8.1. Findings of the Study:

The findings of the study are classified into: a) Training programmes and its effects, b) Stimulation to Sericulture c) Facilitating/Supporting factors to Sericulture.

A. TRAINING PROGRAMMES AND ITS EFFECTS:

The sample includes 72 trained farmers. Following factors shows the training and its effects in improving the skills of the sericulture practicing farmers.

8.1.1. Category-wise Trained Farmers:

Training helps to improve job related skills. The study came to know that, out of the total 320 sample farmers, only 72 i.e., 22 percent were trained and remaining untrained. The trained farmers include 72.22 per cent small, 13.89 per cent medium and 8.34 per cent marginal category. The big farmer share is 5.55 per cent only.

8.1.2. Places of Training:

Job related skills and knowledge could be gained through a systematic programme called training. Various training schools / institutions were established in the state to provide training to the sericulture farmers. Most of the sample trained farmers i.e., 83.33 per
cent took training in training schools / institutions and remaining 16.67 per cent at agriculture colleges, research centers & other places.

8.1.3. Number of Times Training Undergone:

Knowledge is not one time achievement it is a continuous process. Therefore, many farmers attend the training programme more than once. Training is needed not only to the freshers, but also to the experienced one. Most of them i.e. 63.80 per cent attended training programme once only and 22.20 per cent twice. Remaining 14 per cent took training thrice and many times.

8.1.4. Duration of Training Programme:

The duration of training programme differs depending upon the objectives to be achieved. For most of the trainees i.e. 80.56 per cent the training duration is of one to three week’s period, while for 11.11 per cent it was less than a week and for 8.33 per cent it is more than three weeks duration.

8.1.5. Training Methodology:

Various training methodologies were adopted while providing training to the sericulture farmers. All the sample trained farmers (100 per cent) took training under both classroom & demonstration method. Only theoretical or only practical demonstration methodology was not adopted in the training programmes.
8.1.6. **Attending the Training Programme:**

The training may be attended before or after establishment of mulberry garden. Most of the trained farmers i.e. 90.2 per cent attended training programme after establishment of mulberry garden while 9.8 per cent attended before.

8.1.7. **Objectives of Joining Training Programme:**

It came to know that, out of the 72 trained farmers, 64 attended after establishment of mulberry garden in their farm. They joined the training camp with varied objectives. The most important objective of attending training was to speedup the sericulture activity (93.75 per cent), followed by to know about new technology (84.37 percent). However, new methods of rearing and management of silkworms in different instars were the other objectives.

8.1.8. **Training Expenses:**

Some one must meet training cost. Expenses of the training were met by the government, which is expressed by all trained farmers i.e., 100 per cent (fully sponsored by government). There is no case of partly sponsored or expenses paid by the farmer trainee themselves.

8.1.9. **Opinion about Trainers:**

The success of training programme mainly depends upon the committed and knowledgeable trainers in the training programme. A mixed opinion was found. Half i.e. 50 per cent sample trained farmers
opined that, trainers were excellent. Of the remaining, 33.33 per cent and 16.67 per cent opined that the trainers were good and moderate respectively.

8.1.10. **Training Environment:**

It is found that, 94.50 per cent trained farmers expressed that the training environment was cordial, giving scope for interaction between trainer & trainee. However, a few i.e. 5.50 per cent frankly said, the training environment was non-cordial.

8.1.11. **Satisfaction of Training Programme:**

Training provides knowledge on various matters. The level of satisfaction derived by the trainee differ, it may be full, partial or nil. It is found that most of the sample farmers derived full satisfaction. As mean value of full satisfaction is found to be 38, which is greater than other categories. Among the full satisfaction, the highest full satisfaction is found in adoption of new technology expressed by 86.12 per cent trained farmers. In the category of partial satisfaction and no satisfaction, the highest was in marketing of cocoons.

8.1.12. **Training Benefits:**

The trained farmers derived benefits in various areas of sericulture activities. The farmers expressed full satisfaction about the training programme. The highest mean value of 61 is found in full benefits category compared with part and no benefit. Thus, the hypothesis,
"Training benefits in improving the skills of farmers in different areas of Sericulture" is proved. However, the highest full benefit received is found in bed-disinfections (100 per cent), egg transport (97.22 per cent) protection against attack of Uzi-fly (90.27 per cent), effective utilization of water, application of fertilizer etc. In case of part benefit, the highest benefit is found in soil health.

8.1.13. **Retaining Contact with Training Institution**

Generally farmers retain/maintain contact with training institution/trainers for their problems. Majority i.e. 66.67 per cent trained expressed that, they maintained regular contact with the training institution/trainers while others expressed negatively.

8.1.14. **Solutions to the Problem:**

Those trained farmers who have retained contact with training institution/trainers, 54.15 per cent, said that their problems were solved by visiting the field/rearing house. Remaining, 41.67 per cent got the solution by additional training and 4.17 per cent farmer's problems unique in nature, were sent to the research centre.

8.1.15. **Satisfaction derived by the Solution:**

Of the solutions offered by the trainers/institution to the problems brought by the trained farmers, 66.67 per cent said, they derived full satisfaction, 25 per cent partial and a few i.e. 8.33 per cent said they had not derived any satisfaction.
8.1.16. Sharing Experience with Successful Entrepreneurs:

Sharing experiences of successful entrepreneurs with trainee, encourage and motivate the trainees to work hard for achieving the expected result. Most of the trained farmers i.e. 90 per cent expressed that they were experienced with sharing and remaining expressed negatively.

8.1.17. Follow-up Measures:

Follow-up measure means a continuous touch with trainee to watch their progress. It is observed that, 86.12 percent sample trained farmers held that the training institutions undertook follow-up measures, remaining 13.88 per cent expressed negatively.

B. STIMULATING FACTORS FOR SERICULTURE:

There are various factors, which stimulate the farmers to undertake sericulture activities. Following are the important stimulations discussed in the study.

8.1.18. Sources of Motivation:

New entrants need motivation to undertake sericulture in the non-traditional area. There are 118 new entrants to the sericulture. It is came to know that, those who entered the sericulture activity newly, 49.15 per cent said they were motivated by their friends and 25.42 per cent by family members. The extension agency could motivate 22.03 per cent and the relatives motivated only 3.40 per cent.
8.1.19. **Favourable factors to Sericulture:**

The farmers of the study area favoured to undertake sericulture activity owing to certain special features. Relatively profitability was the most important favourable feature expressed by 72.50 per cent sample farmers. 35 per cent favoured sericulture, as it does not need special skill and 26.56 per cent favoured because of in-door activity. The last but not the least, favoured sericulture due to less strain and working in good climatic condition.

8.1.20. **Inducing / Compelling Factors:**

The sample sericulture farmers were induced to take up sericulture due to various factors. Majority of farmers i.e. 50.62 per cent were induced due to its year round income. However, 45.62 per cent were induced due to scope for innovativeness. For the 30 per cent sample, its low investment nature. The other inducing factors were training and experience, professional competency and unemployment.

8.1.21. **Attraction to Sericulture:**

Multiple features of sericulture attracted the sample farmers. Among all other attractive factors, the main factor is the assured income expressed by 90 percent sample farmers. Comparatively high income was another attraction to sericulture expressed by 83.75 per cent sample farmers. 68.75 per cent small land holding, 35.62 per cent quick
turnover and 27.18 per cent were impressed by the success of some others and low risk respectively.

8.1.22. **Facilitating factors for Sericulture:**

There are various factors, which facilitated the farmers to undertake sericulture activity in the study area. Among all, the most important is availability of fertile land and other resources expressed by 50 per cent sample farmers. Suitability of climatic condition is also another facilitating factor expressed by 44.68 per cent sample farmers. The other facilitating factors were: Employment to family members (26.87 percent) ready, assured and accessible market (19.75 percent) and incentives offered by government (15 per cent).

8.1.23. **Risks Involved in Sericulture:**

Sericulture also involves some risks. Among the risks, the most important one is the uncertainty in cocoon crop / yield expressed by 93.12 per cent sample farmers followed by fluctuation in price (90 per cent). Long-term investment (76.25 per cent), fluctuation in temperature & climate (65.62 per cent) and uncertain govt. policy (52.50 per cent) are the other risks envisaged in sericulture.

8.1.24. **Scope for Innovation in Sericulture:**

It is believed that sericulture is having wide scope for application of innovative practices. It is found that majority of sample sericulture farmers (55.62 per cent) agreed that there is wide scope for innovation
and the remaining 44.38 per cent responded negatively. The highest scope was found in Big farmers category, it is 91.6 per cent and medium category it is 88.90 per cent. In case of marginal, it is 60 per cent and in small it is 44.80 percent. Thus, it came to know that for most of the medium and Big farmers category, sericulture activity has wide scope but for small and marginal categories of farmers there is less scope for innovation.

8.1.25. Willingness to Adopt New Technology:

All New technologies generally have the features of convenience, economy and higher returns, but require large investment and training. However, adoption of technology depends upon the willingness of the farmers. 53.75 per cent sample farmers are not willing to adopt new technology, while only 46.25 are ready to adopt it. In the big farmers category, 92 per cent and in medium farmers category 89 per cent are willing to adopt new technology.

Among non-willing, in marginal category it is 80 per cent and in small category, it is 60 per cent.

8.1.26. Solution to Social Problems:

It is believed that, sericulture will help in solving many social problems of rural people / society. Multiple opinions were found from the sample sericulture farmers. 92.50 per cent sample farmers said, sericulture becomes an ideal sideline activity. The 68.76 per cent said,
sericulture is most suitable to small and marginal categories of farmers. It contributes to national income, employment to family members; solve rural unemployment problem and uplift rural population, are the other benefits by sericulture to the rural people.

8.1.27. Recognition of Contributories:

Recognition of persons who are responsible for the success of an enterprise is a good practice. In case of sericulture, the important contributories are the labourers. 95 per cent sample expressed that, they recognized the services of labourers, while 5 percent expressed negatively.

8.1.28. Extension Staff Visits:

Extension staff is the appointed personnel to assist farmers by visiting farmer’s fields and their rearing houses. 58.75 per cent sample said, the extension staff never visited their fields, while 41.25 said it was occasional. With regard to rearing house visits, 69.37 per cent said extension staff visit was regular and 30.62 per cent said it was occasional.

8.1.29. Usefulness of Services of Extension Staff:

It is found that, highest response was received with regard to the services of extension staff. It was in most useful category than merely useful, partly useful and not at all useful. Among the most useful category, the highest response received was in purchase of quality layings, followed by adoption of new technology. In useful category, the
highest response was in availing of incentives and adoption of new technologies.

In the category of partly useful, the highest benefits received are in preparation of land, followed by selection of mulberry variety. Only in few cases, the extension staff services were not useful.

8.1.30. **Benefits of Membership in Quality Club:**

The farmers derive various benefits by joining quality club. There are 32 members who have joined the quality club. All of them said that they are benefited in getting knowledge about government policies & future strategies of sericulture. However, 30 members expressed that, by joining sericulture quality club they were in early receipt of latest technology. The other benefits received were: Economy in purchase of layings & fertilizers, getting rearing equipments, prompt solution to the field level problems, financial assistance and up-to-date marketing knowledge.

8.1.31. **Continuation of Profession:**

Generally the children of agriculture farmers continue the profession of their parents, in the same way, sericulture also. Of the total 320 sample farmers, 211 expressed that, their children would continue their profession of sericulture and 65 said their children were avers to it. However, 44 said, their children had not given any thought of it.
C. FACILITATING/SUPPORTING FACTORS TO SERICULTURE

Sericulture can be undertaken because of certain facilitating or supportive factors. The factors, which enthused the farmers of the study area, is analyzed and presented in a following way.

8.1.32. Land Utilized and Sources of Water:

Fertile land with availability of water is the main requirement to undertake sericulture activity. It is found that, 91.25 per cent farmers had irrigated land for mulberry plantation and the remaining managed with rain-fed land.

Most of the sample farmers i.e. 93.75 per cent met their water requirement through bore-well and the remaining by open wells or canal.

8.1.33. Adoption of Recommended Sericulture Practices.

It is found that, the adoption of recommended sericulture practices is high in full adoption level compared with partial and non-adoption level.

In case of full adoption, the highest response received is in the case of sorting, followed by feeding. The highest partial adoption was found in spacing of worms followed by planting space. The non-adoption was found in mounting.

8.1.34. Cocoon crops:

Cocoon crops are the output of the sericulture product. Higher the cocoon crops more will be the returns. The average number of cocoon
crop in the study area was found to be as many as 5 (five). Among the sample, 67.18 per cent are in the category of 4-6 crops a year, 21.56 per cent are in the category of 1-3 crops and only 11.26 per cent were in the category of above 6 crops a year.

8.1.35. Varieties of Silkworms Reared:

Both the varieties of silkworms are reared in the study area. It is found that, most of the sample farmers i.e. 69.38 per cent rear cross breed variety while 19.37 per cent rear both cross breed and bivoltine variety and only 11.25 per cent rear only bivoltine variety of silkworms.

8.1.36. Opinion Regarding Bivoltine Silkworm Rearing:

Multiple responses were received towards rearing of bivoltine silkworms. Most of the respondents i.e. 77.50 per cent expressed that, bivoltine silkworms are highly susceptible to diseases & 1.25 per cent opined that the return by bivoltine silkworm is not assured. Uneconomical operation, lack of special knowledge to rear and mulberry is not suitable, were the other reasons expressed by the sample farmers.

8.1.37. Source of Funds for Construction of Rearing House:

Independent rearing house is the basic need for sericulture activity. Of the sample 320, only 278 farmers have independent rearing houses while remaining farmers possess dwelling house for rearing of silkworms. 60.07 percent sample farmers constructed separate rearing house with their own funds, while 26.98 per cent by obtaining loans
from bank. Only 12.95 per cent got constructed by availing government subsidy and bank loan.

All sample farmers i.e. 100 per cent of medium and big farmers category have the independent rearing house, while in case of small farmers it is 81.5 per cent and in marginal category it is 80 per cent. Further, in big farmers category, the construction of an independent rearing house with their own funds was of 58.33 per cent and with bank loan it was 41.66 per cent.

In medium category of farmers, Bank loan & government assistance is of 36 percent and own funds of 28 per cent. In small farmer’s category 60 per cent by own funds and remaining by bank loan and government assistance. In marginal category, the highest of 87 per cent by own funds and remaining by bank loan and government assistance.

8.1.38. Problems in getting Bank Loan:

Farmers face various problems in getting loan from banks either for construction of rearing house or for purchase of rearing equipments. High rate of interest become the major problem expressed by 86.87 per cent sample farmers, followed by lack of support by the government i.e., 72.5 per cent. The third important problem is that of delay in release of incentives for recovery of loan and the fourth is the small land holding and the fifth is delay and lengthy procedure for obtaining loan. Only a few i.e., 27.5 per cent expressed that, the problem of getting loan is lack of linkage between the cocoon market and the bank.
8.1.39. **Norms for Construction of Rearing Houses:**

The rearing houses are the places where cocoons are harvested. The rearing house should be constructed by following the prescribed norms. Most of the sample farmers i.e. 78.75 per cent followed the prescribed norms of rearing house in full, the remaining 21.25 per cent in part. No one said that the norms were not followed.

8.1.40. **Protective Measure against Attack of Uzi fly:**

Attack of Uzi fly to the silkworms is the serious problem faced by most of the sericulture farmers. All efforts go waste if the rearing house is not protected from attack of Uzi fly. Almost all the sample farmers undertook the protective measures against the attack of Uzi fly, either in full or in part and no one was found fully negligent. However 58.75 per cent were found taken protective measures in full, while 41.25 per cent partially.

Most of the marginal category i.e. 70 percent and small category i.e. 55.7 per cent, Medium category i.e. 61 per cent and Big category i.e. 58.5 per cent farmers adopted protective measure in full and remaining partial against attack of Uzi fly.

8.1.41. **Areas of application of Innovative Ideas in Sericulture:**

Innovativeness is the application of new ideas. Sericulture has wide scope for innovation. The sample farmers said that, there are multiple areas in sericulture activities where innovative ideas can be
applied. Among them, 91.01 per cent said regarding mechanization in harvesting of cocoons, followed by application of new technologies (89.88 per cent). The least response i.e. 16.85 per cent is for contract farming system. The other areas are: Economy in Transport & sale, Finding New Markets and using cocoons for multiple purposes are the areas where innovative ideas can be applied.

8.1.42. **Reason for Non-adoption of Innovative Practices:**

Of the total 320 sample farmers, 142 said, sericulture has no any scope for application of innovative practices. Multiple opinions were found from the sample sericulture farmers for non-adoption of innovative practices. Among all reasons, all the 142 sample sericulture farmers said that sericulture is farm-oriented activity and production of cocoons in small quantity in the reason for non-adoption of innovative practices. However, 91.54 per cent said that there are limited end users and 90.14 per cent said sericulture is labour oriented activity, where innovative ideas cannot be adopted.

8.1.43. **Use of Working Hands:**

Sericulture is a labour intensive farming activity; need working hands of both hired & family labourers. Majority of sample farmers i.e. 71.88 per cent say, they use both family as well as hired labourers for their sericulture activities, while 22.50 per cent say, they manage only with family members and 5.62 per cent with hired labourers.
Further it is found that, most of the marginal farmers i.e. 90 per cent use family labour, while 89.05 per cent of small farmer’s category use both family and hired labourers. In case of middle farmer’s category, 77.78 per cent used both family labour as well as hired labour and in Big farmer’s category, 58.33 per cent use hired labourers and the remaining by both kinds of labourers.

8.1.44. Composition of Hired Labour:

Sericulture is a labour intensive industry, where both men and women can work together. Both are equally competent to do all the activities. Of the farmers who employ labourers for sericulture activities, most of them i.e. 80.86 per cent employ labourers consisting of more female and less male and only 19.14 per cent say that they employ more male and less female labourers. There was no any case of hiring only men or only women in the study area.

8.1.45. Facing Labour Shortage Problems:

In rural areas, agriculture is the main occupation where almost all are engaged in agriculture activities. The sericulture activity is also related to agriculture. The mulberry yield is also more during agriseason. Therefore, during that period, the sericulture farmers find shortage of hired labourers. Of the total 230 farmers who employ labourers for their sericulture activities, 59.13 per cent said, they face the problem of shortage of labourers and the remaining 40.87 per cent held they did not face any such problems.
8.1.46. Work Participation:

Both male and female participate in Sericulture activities and both are equally competent. Generally, in indoor activities the female participation is more and in outdoor activities the male participation is more.

It is found that, in indoor activities, the female contribution is more than male, since the average participation is found to be 215, which is more than male participation of 104. Further, more uniformity was also found in male since the co-efficient of variation is 30.54 which is less than male i.e. 54.98. Further, in case of bed cleaning and timely feeding, the female contribution was the highest i.e., to the extent of 86.35 per cent and 83.75 per cent respectively. The highest contribution by male is found in packing (61.88 per cent) and maintenance of humidity (49.37 per cent) in indoor activities of sericulture.

In cases of outdoor activities, the average contribution is more of male than female. The mean value of male is highest to the extent of 393 compared with female 27. Further, the male contribution found to be uniform in all outdoor activities than in the female, since the coefficient of variation is lowest in male.

Further, it came to know that 100 per cent male participation is found in Garden establishment and 71.88 per cent in harvesting of mulberry/shoot rearing. In pest and disease control measure, it is 84.38 per cent. Small percentage of female contribution is also found in all
outdoor activities except garden establishment and irrigation, which is generally a strenuous one.

8.1.47. **Encouragement for Adoption of Technology:**

Today technology is fast changing. Of the total 320 sample farmers, only 148 farmers have shown interest in adoption of new technology. Multiple responses were obtained from the farmers towards adoption of new technology. 91.89 per cent said that, labour saving devices encouraged attracting new technology. The second important encouraging factor expressed by 52.70 per cent sample farmers is Education & Training. The third and fourth encouraging factors were: extension staff - 32.43 per cent and incentives offered - 24.33 per cent.

8.1.48. **Reason for Non-adoption of Technology:**

New technology has its own merits but still some do not apply. Of the total, 172 sample farmers have not-adopted new technology. It is found from that, the sample farmers for non-adoption of technology gave multiple reasons. Among many reasons, the important one is meager incentives offered by government for adoption of new technology as expressed by 88.37 per cent, followed by non-availability of space by 86.04 per cent. The other reasons were: Non-availability of easy bank loan (84.88 per cent) for purchase of rearing equipments, high cost and low return by the technology (70.93 per cent), lack of encouragement by the extension staff (56.97 per cent) and want of technical knowledge (20.9 per cent).
8.1.49. **Crop Insurance:**

Insurance is a safety measure against possible loss. The availability of insurance scheme to cocoon crop is debated. It is found that no one has insured the cocoon crop in the study area.

8.1.50. **Knowledge about Crop Insurance:**

It is learnt that earlier there was an insurance scheme for sericulture, introduced by the government but later it was withdrawn. Therefore, some have some vague knowledge about cocoon insurance and some others are in the dark.

It is found that, most of the sample farmers i.e. 91.25 per cent have no any knowledge / idea of cocoon crop insurance. The remaining 8.75 per cent have some idea but the procedure is lengthy and undue delay in payment (3.2 per cent) and the extension personnel also said not give any idea about the insurance scheme (5.3 per cent).

8.1.51. **Transportation Problem:**

The cocoons obtained from silkworms are to be sent for reeling within 8 to 10 days of pupation. They should be transported for reeling in early morning hours or in the night. i.e. in cool hours.

The analysis of Table 7.22 indicates that the sample farmers face multiple transportation problems. Among all the problems, small quantity coupled with high cost was a major one expressed by 65.62 per cent sample farmers. Another major problem was non-availability of
8.1.52. Marketing Problems:

There are various cocoon markets established and managed by the Government of Karnataka. The cocoons products are to be marketed only at such regulated markets. The markets are established with all facilities. Still the farmers face certain problems.

The most important marketing problem of the sample farmers is insufficient number of customers (reelers) as opined by 65.62 per cent of sample farmers. The second important one is lack of grading system (56.87 per cent) of cocoons brought by the farmers to the cocoon market. The third important problem is shortage of display space (43.12 percent). The other problems were: Collusion of Reelers & Marketing Officers, Improper weighing and Delay in payment of sale proceeds.

8.1.53. Constraints to Sericulture:

It is found that, the sample sericulture farmers have multiple constraints to undertake sericulture activity. Among the listed constraints, field level problems like shortage of water (94.37 per cent) and low mulberry yield (81.87 per cent) ranking I & II were important. The secondary problems are: lack of disease control measure (65.62 per
cent) and dramatic climatic change (43.12 per cent). The other constraints are: scarcity of labour and non-availability of layings in time.

8.1.54. Threats to Sericulture Industry:

Like any other industry, sericulture industry is also facing certain threats. The most important serious threat to the sericulture industry is low/uneconomic market price for their products as expressed by almost all sample farmers (100 per cent). The second important is production in limited/small quantity and of inferior quality (73.75 per cent). The third is the import of raw silk at lower price (66.2 per cent). The other threats are: migration of labourers to urban areas (55.62 per cent), non-availability of improved technology (30.62 per cent). The last though it is least is lack of product varieties and export opportunity (11.87 per cent).

8.1.55. Suggestion for Improvement:

Experienced Sericulture Practicing farmers of the study area suggested that, fixation of cocoon price based on cost of production and not on the market demand and supply. The second important is the extending support price to the products brought to the market (71.25 per cent). The other suggestions were: extension of financial support for construction of rearing house (61.25 per cent) and ban the import of silk (55.31 per cent) were the second, third and fourth suggestion respectively free supply of rearing equipments (50 per cent), regular assistance by extension staff (43.12 per cent), encouragement of export (41.25 per cent) and develop product varieties (26.87 per cent).
8.2. SUGGESTIONS:

On the basis of the findings, the following measures are suggested to minimize the intensity of problems for growth of sericulture industry in the study area and develop entrepreneurial qualities among sericulture practicing farmers.

8.2.1. Introduction of Contract Farming Method:

The contract system of farming is considered to be effective where small and marginal farmers are more in number and are incapable of organizing capital investment, quality inputs, marketing and processing.

Contract farming is a system where the production and supply of produce is made under a contract between producers / suppliers and buyers. It is a contractual agreement for farmers, that the firm will normally undertake to purchase all produce grown within specified quality and quantity parameters. The key feature of contract farming is risk sharing i.e., allocating risk between the company and its growers. Contracts also provide farmers with access to a wide range of managerial, technical and extension services that otherwise may be unobtainable.

The most important advantage is that, the Farmers are benefited by efficient use of farm resources, improved methods of applying chemicals & fertilizers, knowledge of quality, demand for exports etc. However, the farmers have the problem is Monopoly of single crop, farmers are locked
with one crop only, and they cannot change though other crops are beneficial to them.

Though the system has its own inherited defects, the government has to prepare a standard farm contract by which the farmer's interest is to be protected and the firm also benefited. Contract forming regulatory agency may be established to govern and regulate. Thus, it requires long-term commitment from both the parties.

### 8.2.2. Establishment of Sericulture Growth Bank:

Apart from the farmers, each sericulture co-op. society existing which have limited resources. A Separate Bank titled Sericulture Growth Bank is to be established for development of sericulture activities in the state. All sericulture farmers including the department of sericulture should transact with this bank only. State Govt./central government/agriculture banks should contribute initial capital. However, the additional capital be raised by issue of shares to the sericulture practicing farmers and to public. There must be a proper link between cocoon market, silk exchange and the bank. Finance required by the farmers is provided through this bank only. The Bank officials are trained in sericulture activities to understand well about sericulture. The subsidy/incentives be distributed through this bank only. Some progressive farmers should be included in the Board of Management. The bank has also to prepare the proposals to be submitted to the government for development of sericulture in the state.
8.2.3. **Establishment of a Foundation – Chul Thai Silk Model:**

M/S Chul Thai Silk Company was founded in 1968 at Thailand with an objective to produce cocoons and reel the silk. The company works with contract system and member farmers receive the eggs from the company, soon after harvesting, the cocoons are purchased by the company at a fixed price. The company has an agreement for profit sharing with contract farmers.

As co-operative system in India is common, if this practice is followed there will be a large-scale production of silk cocoons with less risk to the farmers. Most of the marginal and small farmers join this scheme.

8.2.4. **Strict Enforcement of Silk Act:**

Strict enforcement of Silk Act to be made to prevent the entry of smuggled silk into the country. Though it is cheap but affect the price of cocoons in the market brought by the sericulture farmers,

8.2.5. **Leasing Government land:**

All authorities agree that wastelands belonged to village as a whole. Koutilyā in his Arthashastra, \( \text{\textsuperscript{a}} \) Land may be confiscated from those who do not cultivate them and given to others; or they may be cultivated by village labourers and traders, lest those owners who do not cultivate them might pay less. Again land prepared for cultivation shall be given to tax payers only." Thus, the government should lease out the fertile
land particularly to landless laborers for undertaking sericulture activity. This will help in increasing the number of farmers.

8.2.6. Conservation of water:

Sufficient and regular supply of water is the main requirement for the development of sericulture. Thus, drilling of community wells, borewells and installation of community pump houses by government agencies like Zilla Panchayats, Gram Panchayats, Irrigation Departments and Public Works Department etc., be done. Further conservation of water by construction of ponds, barrages across rivers streams etc. would help solve the water shortage problem.

8.2.7. Creation of Data Base:

It is imperative to have a reliable database on vital aspects of sericulture. Therefore, NABARD in collaboration with CSB and DOS should develop database covering various aspects of sericulture to know more and make the planning.

8.2.8. Sericulture became a Mandatory to Agri-Farmers:

In the areas where climatic condition is good for both mulberry plantation and silkworm rearing, a mandatory provision be made that all farmers whose land is suitable should undertake mulberry plantation on their lands and rear the silkworms or make over that mulberry to others. At-least 10 per cent of their land is earmarked for plantation of mulberry.
8.2.9. **Free Supply of Rearing Equipments:**

In India most of the farmers belong to small and marginal categories and are resource poor persons. Therefore, to attract the sericulture activity in non-traditional areas free supply of rearing equipments to be made. Further, for new entrants new saplings of mulberry and layings at concessional rate to be made.

8.2.10. **Encourage Bivoltine Sericulture:**

As bivoltine silk has both domestic and international demand, special programmes are organized to popularize the bivoltine silkworms. Proper knowledge is given to all sericulture practicing farmers regarding bivoltine silkworms and get good returns.

8.2.11. **Popularize Sericulture Through Mass Media:**

The department for popularizing the sericulture activities should use mass media communication. Prepare short stories, episodes etc. to create awareness among the farmers about the importance and advantage of sericulture. The programmes are organized to attract educated rural youth. Printed literature, material is supplied, including rich experiences of successful entrepreneurs in the field. Export opportunities be popularized.

8.1.12. ** Preferential Treatment for Women Entrepreneurs:**

The cocoons produced by women are purchased by government agency and market price be paid to them. Further, easy & quickly
processing of applications of women is made and participation of women be encouraged in all developmental activities

8.2.13. **Motivate Adult Women:**

Adult women are generally decision-makers in the family affairs. Therefore, while selecting the women farmers, motivating the adult women better than young women. Such trained women become alert, bold, vocal and conscious of their needs and problems.

8.2.14. **Training about Negotiation Technique:**

The farmers generally lack in relevant education, limited quantity of produce and immediate need of money make them to sell their produce without proper negotiations. Therefore, during training programmes proper knowledge regarding negotiation technique be given to them.

8.2.15. **Matching Training Period:**

To be effective, the training programme should be held in places convenient to the trainee farmers. On the farm and in the village are the best locations for small groups to learn skills that they can immediately use. On the other hand, in a situation where large number of farmers and extension personnel are involved in learning a particular skill. The timing is also important; prior to the start of the cropping season would be the ideal time.
The attention that trainers can give to trainees and the interaction occurs between the trainees and the trainers. Experience in different parts of the world suggest that most ideal number of trainees would be a group of 20-25 for learning about theory and a group of 4-5 for practical work.

The training programme should suit the sericulturists convenience i.e. the training programmes be arranged at a time when the farmers have no work or less work. Further, the training period should be flexible and suitably adjusted with the requirement of trainees.

8.2.16. Arranging Mobile Training Programmes:

Many farmers are not interested/ no time to go to training schools / institutions for learning due to their pre-occupations. Therefore, mobile training camps are held at each village, particularly in the evening. All farmers including women will attend the training programmes. Further, a short-term duration of 1 to 3 days field demonstration is be arranged to give practical knowledge about the new technologies. In addition, to new varieties of mulberry, rearing techniques, storage, disinfections, humidity and climatic condition etc. knowledge be given.

8.2.17. Credit facilities:

Credit facilities be extended to sericulture farmers both for construction of rearing houses, farm related activities, purchase of
rearing equipments etc. Rural banks should be instructed to provide financial assistance at concessional rate on preferential treatment.

8.2.18. Market Research:

Regular market research is conducted to understand the product requirement, changing fashions, use of silk cocoons for other purposes etc. so as to produce the quality and quantity of cocoons. Further, National Information System is established to get useful data for making better policies.

8.2.19. Establish Linkage with Banks:

Due to small land holding and limited income of the Sericulturists, the Banks are unable to recover their loan installments within the stipulated time. Therefore, proper linkage is established with the cocoon market office and the bank to enable the latter to collect loan installments from the sale proceeds of cocoons.

Therefore, technologies to be developed to assess the quality of silk available in cocoon so as to fix the minimum price for cocoon. This would avoid the collusion of reellers and the market officials. Further, the farmer will have the guarantee of his returns.

8.2.20. Arranging Entrepreneurial Training:

Instead of skill oriented training in the training schools/institutions, entrepreneurial training is conducted so as to enhance their confidence and find the new markets, varieties, export opportunities etc.
8.2.21. **Quick release of Subsidy/Incentives:**

People wait for a long period to get their subsidy /Incentives, which hindered the progress of sericulture activities and the banks, are reluctant to give loans to the farmers expecting this amount. Therefore, such sanctioned amount is to be released quickly.

8.2.22. **Introduction of Labour Savings Devices:**

Sericulture is labour intensive agro-based rural industry. It requires more labourers. Therefore, labour saving devices developed and popularized to avoid the problems of labour. As the labour cost forms the major item in the total cost of production, find out the alternatives of saving devices.

8.2.23. **Sericulture and Dairy be made as a package:**

The mulberry wastes are used as fodder for cattle / poultry / fish etc. Mulberry leaf stalk / stump form the low cost / no cost alternative fodder for cattle. It is estimated that, the bed refusal and tender stumps obtained after using mulberry for silkworm is sufficient for feeding three cows. Further it is found that feeding with mulberry enhances the milk yield by 10 per cent. Thus, to develop dairy along with sericulture a special package would certainly help farmers, improve their financial condition.

8.2.24. **Monitoring and follow-up:**

A separate file of each trainee is created showing his training details, and the particulars regarding follow-up measures undertaken by
the training institutions. The most important are - visits to farm and rearing house, problem encountered, suggestions given, meetings held etc. Further, the training institutes should monitor the progress of farmers. This will definitely improve the production and productivity of cocoons.

Now it is essential on the part of the training schools/institutions to get the feedback after one year and watch their progress. Further, the follow-up meeting to be held in every taluk place where the sericulturists meet regularly.

8.2.25. Introduction of Sericulture as a subject in Schools/Colleges.

A subject be introduced at high school level, regarding the importance of sericulture, its contribution to the world and the basic knowledge about silkworm rearing methods. Those who cannot continue the higher education can go for sericulture activity along with agriculture, with the gained knowledge of sericulture in their school/college level.

8.2.26. Proper Identification of Farmers for Training:

Proper identification of potential entrepreneurs is the first and foremost requirement for the success of training programmes. Improper and undeserved, if selected, subsequently results in national waste. Failure in business will also result in misconception about the training programmes. Therefore, utmost care is taken while selecting the
candidates for training, considering their family background, their interest, possibility of establishing a venture, application of innovative practices etc of the prospective trainees. In addition, the training organization also should look into the availability of water, fertility of land, climatic condition of the area where the trainee is going to establish his sericulture farm.

8.2.27. **Increase in Women Training Programmes:**

Generally in rural areas, adolescent girls do not like to go out of their villages. Therefore, the Department of Sericulture should arrange more number of training programmes at village levels exclusively for women or adolescent girls. If the women are properly trained, they can make sericulture as their family enterprise and utilize all the available resources to the maximum extent.

8.2.28. **Arranging Interactive Sessions:**

The Department should arrange regular interactive sessions of sericulture scientists and farmers so as to reap the benefits of the latest research findings. An opportunity is provided regularly to the farmers to present their problems before the experts. Field visits that are most essential be arranged to know the grass-root level problems. With this, the farmers will naturally be inspired to adopt the latest technology.
8.2.29. **Introduction of Insurance Scheme:**

Insurance is a protection against the risk/loss. An ideal insurance scheme is introduced by the Department of Sericulture through insurance companies. It should cover all the risks like mulberry leaf production, disease control and natural calamities affecting the sericulture farmers. The farmers will have the confidence of getting some definite return for their produce even after loss/failure of crop.

8.2.30 **Providing Market Information:**

The production of cocoon is of short duration of one month. The farmers should be assured of their return for the produce. Therefore, information like climatic condition, market opportunities etc., should be given through mass media.

8.2.31 **Use of Non-government Organizations- like BAIF:**

Studies reveal that, the training programmes arranged by Non-Government Organizations benefited the trainees more. Therefore, the Department of Sericulture should arrange the planned training programmes in association with non-government organizations. Such programmes should be mainly in rural areas to make it convenient for the women farmers to attend.

Bharatiya Agro-Industries Foundation (BAIF), a voluntary non-profit organization established in 1967, with a mission encompasses poverty alleviation through applied research, development and training.
in Maharashtra, Karnataka, Gujarat, Rajasthan and Uttar Pradesh. The DOS should use such organization for training and entrepreneurship development in sericulture.

8.2.32. **Seed Certification:**

Several factors contribute towards the quality of silkworm seed. Though there are legislations to make sure the specifications, but the implementation is not followed satisfactorily. The seed producers themselves are the quality certifiers. Now it is under consideration the silkworm seed production center should be certified in line with the ISO 900 pattern, by an independent body, ensuring required processing infrastructure, system in operation, testing method, packaging and supply standards, systems for handling of silkworm seeds as per scientific guidelines.

8.2.33. **New Application of Sericulture Products:**

The future of silk belongs to Asia, particularly China and India, where silk is a not another trade, but a tradition. There is need for in-depth research in newer areas of biotechnology to boost up the quality and productivity of silk, application of silk in non-textile uses, especially in cosmetics, bio-medical areas, eatables, juice etc to widen its base and have better value addition.
8.2.34. Improvement of Marketing Facilities:

It is come to know that, in the whole country only in Karnataka where a fair marketing organization exists. Even here, there is no real assessment of quality prior to marketing of cocoons or rawsilk. Introduce the quality control at all levels and the quality consciousness both with the producers and consumers alike.

8.2.35. Social Responsibilities – Role model:

The entrepreneurs who are developed and promoted at the social cost have certain responsibility to the society that promotes them. The government and other public institutions that invest on them also expect something in return.

These entrepreneurs require to follow certain discipline like prompt repayment of loan, response to tax and statutory requirements, progressive outlook towards labour and above all care for economy and environment. His outlook should be different and create new entrepreneurs by his role model.

CONCLUSION:

Sericulture is fast spreading in all parts of the state as a new source of employment and income generation and farmers are finding it more remunerative.

The favourable environment created by government encourages entrepreneurship Development. The support system provided by the
government determines the success rate of Entrepreneurship Development in Sericulture Industry of the country. There are various institutions providing training on entrepreneurship development in various industrial activities, a separate Institute for Entrepreneurship Development in Sericulture is the need of the hour.

All these measures if adopted by the training schools, extension personnel and Department of sericulture, there would be radical change in sericulture activities, particularly in the study area. With the introduction of WTO, there will be new markets for our value added products, which are in high demand in the international market.