CHAPTER 7

SUMMARY AND CONCLUSION

7.1 GENERAL

Shrimp farming experienced rapid growth in the recent years and it is widely practiced in the coastal districts of Tamil Nadu. However, organized, regular training programmes are not conducted in this field. Alagarsami (1989), Santhanakrishnan (1993), Grijlani (1994) and Dixitulu (1995) have all stressed the importance of imparting training to shrimp farmers. The specific objectives of the study are:

1. To study the socio-personal, socio-economic and socio-psychological characteristics of the respondents in the study area.

2. To ascertain the knowledge level of shrimp farmers.

3. To find out the training needs of shrimp farmers according to farm holdings and in subject matter areas.

4. To work out the relationship between training needs and characteristics of shrimp farmers.

5. To assess the preference of shrimp farming about the type of training, method, venue, season, duration, timings and by whom the training should be offered.

6. To study the problems encountered by the shrimp farmers and suggestions to over come the same.

The study area, comprising of coastal regions of Nagapattinam and Thanjavur formed this cosmos of the study. A total of 300 shrimp farmers, 150
from each district were selected for the study on purposive sampling method. The field survey was conducted in January and February 2000, September and October 2000 and March and April 2001. The data were collected with the help of a well-structured interview schedule incorporating all the items on which information were required and were analysed with suitable statistical tools.

7.2 SUMMARY

The major findings of the study were specified objective-wise and summarized below. The existed difference in respondents of both the categories were brought out.

7.2.1 Socio-personal, Socio-economic and Socio-psychological characteristics

Significant differences existed in social participation and training programmes attended between the respondents of two districts. No significant difference was found between the respondents-shrimp farmers of both categories with respect to age, educational status, occupational status, farming experience, shrimp farm size, number of shrimp farms, land ownership pattern, number of farm sites, material possession, mass media exposure, extension agency contact, economic motivation, risk orientation, scientific orientation and innovativeness, and attitude towards training.

7.2.2 Knowledge Level of Farmers

Shrimp farmers of both districts differed from each other with regard to the knowledge level of farmers.
7.2.3 Training Needs of Shrimp Farmers

Ninety four percent of the respondents preferred to undergo training programme on shrimp farming.

7.2.4 Major Subject Matter Areas Preferred for Training Programme According to the Farm Size

Most of them had farm holdings less than 4 ha. The shrimp farmers of both districts required training in disease management, water management, soil management, pond management, feed and feeds management and hatchery operations.

7.2.5 Specific Subject Matter Areas Preferred for the Training Programme

Under the major heads of the training programme namely disease water, soil, pond, feed and hatchery operations, The respondents of Nagapattinam and Thanjavur districts significantly differ in their training requirements. The major subject matter and specific subject matter areas are the following.

Disease management : Factors affecting disease.

Water management : Importance of water parameters, disinfection of stored water, water management during culture period and discharge water after treatment.
Soil management : Soil analysis and soil sampling, importance of soil characteristics, soil management during culture period, fertilizer application.

Pond management : Pond preparation in acid sulphate soils.

Feed and feeds management : Feed, balanced nutrition, manufacture of local feeds and feeding strategies.

Hatchery operations : Transportation of seeds and periodical sampling.

7.2.6 Correlation between Characteristics of Respondents of both the Districts

It could be concluded that the characteristics such as education, social participation, mass media exposure, extension agency contact, economic motivation, risk orientation, innovativeness, scientific orientation, training programmes attended and favourable attitude towards training programme showed positive relationship with the training needs of shrimp farmers of both the districts. It denotes for an increase in Y variable, while there is a corresponding increase in the x variable. The variables age, farm size, and occupational pattern were showing non-significant relationship. The variables for number of farm sites, number of ponds, ownership pattern, occupational status and material possession were showing negative non-significant relationship in line with both the districts.

7.2.7 Relative Contribution of Characteristics to Training Needs

Of the 10 variables taken for analysis, five variables, viz., social participation, mass media exposure, extension agency contact, economic
motivation, risk orientation contributed 0.01 level and training attended significant at 0.05 level. An unit increase in media exposure, extension agency contact, economic motivation, risk orientation and training attended would lead to an increase in training needs by corresponding units, keeping other variables at constant level with regard to both the districts.

7.2.8 Preferred Type, Methods, Venue, Duration, Season, Timing, Size of Group and Preference of Training Personnel

- The respondents of both districts gave a top priority to peripatetic training.
- The respondents who felt the need for undergoing training in shrimp farming preferred demonstration method, field trips and study tours.
- Majority of the respondents (95.03 percent) from both the districts indicated preference for undergoing training within their village itself.
- 91.84 percent of respondents were ready and interested to undergo one week training.
- Generally the farmers of both the districts said that the training could be organized in periods of less intensive farm activities. 94.00 percent of respondents preferred to undergo training in April-June in Thanjavur district, while 100.00 percent of respondents preferred the months of October-December in Nagapattinam.
- 85.10 percent of respondents desired to have full day training in both the districts.
• Top priority (74.82 percent) was given to the size of the group consisting of 11-15 farmers.

• The respondents preferred Scientists from Research stations to train them.

7.2.9 Problems Encountered by the Shrimp Farmers

The implications of losses associated with common risks were identified and focused under the heads of land, water, seeds, feeds, management, marketing, infrastructure, social problems, extension and miscellaneous.

• Land

Delay in license processing, on-issue of patta for poromboke lands, seepage and drainage problem.

• Water

Salinity fluctuations and sea weed problem.

• Seeds

Lack of assured supply of quality seeds, non-existence of government agency for regulating the price of seeds, high cost of seeds, non-availability of seeds from Research Institutes, inadequate supply of hatchery seeds, mortality during transportation, mixed seeds and deceptive methods of counting the seeds
• **Feed**

Non-availability of quality feed from Research Institutes and high cost of feeds.

• **Management**

Lack of knowledge about disease control, lack of knowledge from the Government to safeguard the shrimp farmers’ interests, non-availability of laboratory facilities in nearby locations for analytical work, lack of knowledge about parasites and disease. Mushrooming of many pseudo-consultants and lack of organized associations for safeguarding shrimp farmers interest.

• **Marketing**

Price fluctuation and fixing the correct dollar rate.

• **Infrastructure**

Non-availability of electricity and lack of link roads.

• **Social problems**

Poaching.

• **Extension**

Need for farmers training, lack of adequate publication of extension manuals on shrimp diseases, lack of publication on vernacular language, lack of adequate publication of extension manuals on shrimp farming, lack of extension manuals, lack of extension services, lack of technical capacity and weaker research-extension linkages.
• Miscellaneous

Problem due to birds, invasion by jellyfish, and by molluscs were the problems encountered by the farmers.

7.2.10 Suggestions Mentioned by the Respondents to Overcome their Problems

• Seed

Government research laboratories should set up some more hatcheries and virus free Nauplius should be supplied to the private hatcheries, assurance on quality of seed rom research institute, production of improved brood stock from Government research laboratories and Government should certify quality seeds.

• Feed

Expectation of good feed from the Government Research laboratories and to reduce the cost of the imported feed.

• Management

To safe guard shrimp farmers interest, full fledged microbiology lab and technical guidance should be available and co-operation among shrimp farmers.

• Extension

Need based training programmes on current issues, publications through magazines and in vernacular language specially on shrimp farming, need of a multi-disciplinary team, improving research-extension linkages etc.
7.2.10 **Implications of the study**

Based on the major findings of this study, certain implications and recommendations are put forth below:

The extension workers could take the variations with regard to differencial characteristics of shrimp farmers in Thanjavur and Nagapattinam into account when they approach for any training programme to be conducted in future. The gap in knowledge level between the respondents of both the districts was due to the factor that majority of them had not undergone any specialized training on shrimp culture practices. Hence, there is an urgent need to train those shrimp farmers. Besides there should be a regular training programme on all the major subject matter area every year.

7.3 **CONCLUSION**

Majority of the shrimp farmers had not undergone any specialized training on shrimp culture practices. Hence, there is an urgent need to train those shrimp farmers. Besides there should be a regular training programme on all the major subject matter every year. It is high time that the scientific community and the shrimp farmers community work together to find solution to many nagging problems and develop skill in every aspect of the shrimp industry.

7.4 **SCOPE FOR FUTURE RESEARCH**

- The research reported here calls for further and more comprehensive researches in the same area. As this study was restricted to shrimp culture only, similar studies may be taken on fish culture and crab culture.
Since this study was done in brackishwater aquaculture similar studies may be conducted in fresh water and marine culture programmes.

A study can be undertaken to study the training needs of farm women in other States i.e. Kerala, Orissa and West Bengal.

Impact analysis of training organized in shrimp culture can be evaluated.

The training need of trainers may also be assessed for giving effective client oriented need based training.

This study is confined with Tamil Nadu alone, similar studies can be conducted at National level.