CHAPTER XI

SUMMARY AND CONCLUSIONS

Flowers are inextricably connected with human life throughout the cosmos from time immemorial. Their economic, social, cultural religious and aesthetic significance have been a veritable avenue for fascinating studies in the years which have passed by. Flower production in India has been given enormous importance for the remarkable role it has played in adding to foreign exchange reserves. However, it cannot be denied that attention has not so far been made to identify areas or regions endowed with the ecological complex most needed for the growth of the floriculture industry and their prospects of development along scientific lines, as a major pre-requisites for ushering in an era of mass production of flowers of every kind with technique of winning the competition.

This study on production and marketing of flowers in Thovalai has been basically intended to show how far Thovalai, a fabled centre for flower production, has been able to make a mark in the realm of flower
production over the years. Contained in this chapter is a summary of the discussions held on various aspects of the topic and the conclusions arrived at.

The study begins with a comprehensive introduction, which throws a flow of light over the kinds of flower produced in Thovalai, their commercial significance and the potential with which India in general is endowed with flower production and the growth trajectory of the floriculture industry over the years. Besides these an allusion to the research problem also has been made.

Review of related studies undertaken by the investigator was rather exhaustive. The investigator could give a deep insight into his research problem and evolve the concepts and the theoretical framework needed for his study.

As it is seen in the second chapter in the objectives and methodology the study has been based on five objectives. The first objective was to examine in detail the ecological features of Thovalai which have a direct bearing on the floriculture industry. In keeping with this objective an attempt has been made in the chapter. This comprehensive study has brought to light how Thovalai region is endowed with well drained sand loams and red loams with soil the value ranging between 6.5 to 7.5. This according to the investigator is externally good for flowers like Jasmine, Rose, Marigold, Nerium, Merjoram and Cocks Comb. For these sun loving crops, the warm
The humid climate in Thovalai region provides a very good eco system. Further the entire Thovalai region is noted for its abundant ground water resources, age old canals and ponds and tanks. They facilitate drip irrigation and canal irrigation which these environmental features of Thovalai have accelerated the pace of growth in production of flowers such as jasmine, rose, marigold, tube rose, cocks comb, nerium and merjoram. The hills and the mountain around abound with medicinal plants keep wafting to the blossom of the plains healthy air needed for sustaining their natural aroma.

The second objectives was to conduct a detailed study of the nature of flowers cultivation in Thovalai. And showing the same chapter an attempt has made how cost such as preparatory cultivation, channel formation, application of manures and fertilizers. Frequent application of pesticides and insecticides and the like are carried on in this part of discusses. The costs of these essential operations have been carefully worked out to arrive at the figures on the profit potentials of every type of flower produced. These figures are contained in Tables 5.22 to 5.51.

The third objective was to examine in detail the growth of flower production during the years under consideration. The growth models in chapter six show how the production of Jasmine (Pitchi) has gone up at the rate of 13.54 during the years from 1993 to 2007. However it has been found to be 22.67 for Jasmine (Malligai), 8.27 for Roses, 7.56 for Marigold, 0.80 for
Crossandra, 14.32 for Nerium, 9.13 for Bachelors Button, 3.6 for Merjoram, 13.14 for Tube rose and 3.11 for Cocks Comb. These growth trends show the average rate of growth of the production of varies kinds of flower production has been in Thovalai, over the years.

The fourth objective was to delve deep into the cost structures and resource use efficiency of every kind of flower produced in Thovalai. Based on this objectives an exhaustive study on the production function and resource use efficiency has been undertaken in chapter VII. The relationship between the cost ratios and net-returns has also been calculated to see how far flower production is profitable. The study includes samples from large farmers, medium farmers and small farmers producing all these ten kinds of flowers.

The fifth objective was to deal with the marketing channels and marketing strategies known to flower producers in Thovalai region. In chapter VIII the marketing channel available for large farmers, medium farmers and small farmers producing all the ten kinds of flowers have been beautifully explained. The marketing chain in chapter eight explains how the flowers produced in various places move to the local and distant markets, through their respective channels. Along with this study, an attempt has also been made to show the price levels during various seasons for kinds of flowers. The ups and downs in prices brought about by seasonal changes in demand
and supply has been explained beautifully by Table 8.2 and its corresponding bar diagrams. Added to this is a detailed analysis of purchase and sales method known to people in Thovalai and the part played by the commission agents in manipulating them.

The last objective was to study the problems and prospects of the floriculture industry in Thovalai. A careful attempt has been made in chapter nine to show how real estate business, crop risks, lack of adequate post harvest handling technology and the inability of flower producers in accessing crop insurance facilities, have been a major threat to producers of flowers for local and export markets. The investigator has also dealt with in this chapter the extent to which certain well known financial bottlenecks have been trying to impede the growth of the floriculture industry in Thovalai.

The future prospects of the floriculture industry explained in empirical terms show how there is in want for floriculture industry in Thovalai a period of unprecedented growth over the years.

Based on the discussions held in all the ten chapters the investigator wishes to place on record some of his valuable findings.

1. Flowers have immediate and long-term positive effect on the emotions, reactions, mood and social behaviour of individuals. They also trigger emotional happiness, tremendously influence the work place
environments, home ecology while propitiating Gods and Goddess in pujas.

2. Flowers are generally cheap, eco friendly and bio-degradable.

3. The dry flower industry and floral oil industry are known for their widening overseas market.

4. In the Thovalai floriculture industry there are a visible shifts from traditional flowers to cut-flowers for export purposes.

5. The export potentials of India has been evergrowing phenomenon. The value of flowers exported have gone up from Rs.14.55 crores in 1991-92 to Rs.96.6 crores in 1998-99. The same has gone upto Rs.381 crores in 2006-2007. It is expected to reach an all time high of Rs.4,000 crores in the next five years. The share of Thovalai in these exports has gone up from 2.75 crores in 1992 to 21.5 crores in 2006-2007.

6. Floral oil and the extracts from flowers could be used for treating rheumatism, ear ache, diseases of blood, asthma, burning sensation, nervous disorders and boils arising out of summer heats.

7. Among the various flowers produced in Thovalai, Jasmine enjoys a place of predominant significance because it includes the most popular Pitchi and Malligai. Bumper harvests of Jasmine are expected in the Tamil months of Thai, Masi, Pankuni and Chithirai. The lean season
for the same includes the month of Ani, Aadi and Avani. The cost of cultivation of one hectare (ha) of Jasmine (Pitchi) works out at Rs.1,69,206/- in the case of large farmers. The same has been found to be Rs.1,68040/- and Rs.167345/- in the case of medium and small farmers respectively. The profit made out of one hectare of Jasmine has been found to be Rs.1,73,919/- in the case of large farmers, the same has been found to be Rs.179960/- in the case of medium farmers, the same has been found to be Rs.155380/- in the case of small farmers.

8. The cost of cultivation of one hectare of Jasmine (Malligai) is worked out Rs.155075/-, Rs.154351/- and Rs.153609/- in the case of large medicinal small farmers respectively. The profit made out of one hectare of Jasmine (Malligai) has been found to be Rs.218125/- Rs.211049/- and Rs.202011/- in the case of large, medium and small farmers, respectively.

9. Rose is another beautiful flower produced in Thovalai. The best season of planting roses is just before rainy season. The total cost of cultivation of one hectare of land has been found to be Rs.733330/-, Rs.72590/- and Rs.71280/- in the case of large, medium and small farmers respectively. The profit made out of one hectare has been found to be Rs.93970/-, Rs.93210/- and Rs.91820/- in the case of large, medium and small farmers respectively.
10. Marigold is most easily grown in Thovalai. In fact it has been found to be capable of adopting itself to different soil and climatic conditions. The cost of cultivation of one hectare of marigold has been found to be Rs.49095/-, Rs.48550/- and Rs.47255/- in the case of large, medium and small farmers. The profit made out of one hectare of Marigold has been found to be Rs.74865/-, Rs.73130/- and Rs.73045/- in the case of large, medium and small farmers respectively.

11. Bachelors Button otherwise known as Vadamalli is one of the flower for garland making. The total cost of cultivation of one hectare of Bachelors Button has been found to be Rs.48475/-, Rs.48079/- and Rs.47590/- in the case of large, medium and small farmers respectively. The profit made out of one hectare of Bachelors Button has been found to be Rs.76650/-, Rs.74921/- and Rs.69385/- in the case of large medium and small farmers respectively.

12. Marikolunthu otherwise known as Merjoram suitable for the soil condition of Thovalai. The cost of cultivating one hectare land of Merjoram for large, medium and small farmers are found to be Rs.34920/-, Rs.34293/- and Rs.33960/- respectively and the profit made out of one hectare of Merjoram has been found to be Rs.59160/-, Rs.43127/- and Rs.63620/- in the case of large, medium and small farmers respectively.
13. Nerium is also produced plenty in Thovalai the cost of cultivating one hectare of Nerium for long, medium and small are found to be Rs.113695/-, Rs.113047/- and Rs.112363/- respectively and the profit made out of one hectare of Nerium has been found to be Rs.165305/-, Rs.169703/- and Rs.155387/- in the case of large, medium and small farmers respectively.

14. Kanakambaram otherwise known as Crossandra also found to be quite suitable for soil condition of Thovalai, its cultivation and per hectare has been found to be Rs.48323/-, Rs.47782/- and Rs.47433/- in the case of long, medium and small farmers respectively. The profit made out of one hectare of Crossandra has been found to be Rs.66977/-, Rs.75018/- and Rs.51967/- in the case of large, medium and small respectively.

15. Champanki otherwise known as Tube Rose is one of the important component of garden its demand gone up considerably over the years. The cultivation cost per hectare has been found to be Rs.127624/-, Rs.127090/- and Rs.126688/- in the case of large, medium and small farmers respectively. The profit made out of one hectare of Tube Rose has been found to be Rs.165876/-, Rs.149810/- and Rs.131612/- in the case of large, medium and small farmers respectively.
16. Cocks Comb is otherwise known as Kozhikondai is known for its drought tolerant short duration flower which is suitable for all seasons. The cost of cultivation of one hectare of Cocks Comb has been found to be Rs.29215/-, Rs.28823/- and Rs.28236/- in the case of large, medium and small farmers respectively. The profit made out of one hectare of Cocks Comb has been found to be Rs.33290/-, Rs.31552/- and Rs.28884/- in the case of large, medium and small farmers respectively.

17. The marketing channel differs from producer to producer, they are dominated by middlemen and commission agents.

18. The prices of flowers frequently changing depending on seasonal changes an demand and supply for the same. As far as Jasmine is concerned its price stood at Rs.105/- per Kg in January 2007 and reacted an all time high of Rs.127/- per Kg in the month of September 2007. The price of Jasmine (Pitchi) was found to be Rs.37/- per Kg in June. Similarly monthwise changes have been found in the case of remaining nine kinds of flowers.

**Suggestions**

The investigator after delve deep into various aspects of flower production in Thovalai wishes to make the following suggestions for giving consideration and timely implementations.
1. Though Thovalai provides favourable climatic conditions both in the plains and in the hill areas, floriculturists have not been able to optimise commercial production of decorative and ornamental flowers. It is high time that the farmers seize this golden opportunity.

2. There is an urgent need for the intervention of government and private agencies for the introduction of new and innovative methods in the production and marketing of flowers, with the ultimate goal of boosting up net gains.

3. New technologies like Shade-Net Cultivation and the Green House Technology that have been used effectively in foreign countries should be made familiar to the farmers. Further, sufficient training and financial assistance should also be made available to them to facilitate the advent of new and scientifically proven techniques of plant breeding.

4. A regulated market for flowers is conspicuous for its absence in Thovalai. It is indispensable for the floriculturist in Thovalai. Intrusion of exploiting intermediaries could be kept at bay by a well run regulated market.

5. The flower market at Thovalai is quite volatile. It witnesses insecure price fluctuations. In the interest of the small and marginal floriculturist this problem should be addressed with immediate effect.
6. Open auction systems should be introduced in the flower market at Thovalai so that nationwide participation could be ensured in the purchase and sale of flowers.

7. Though Thovalai is known for the past 100 years, for its uniqueness in the flower industry in the southern region of the State. The demand for its flowers is increasing day by day and many villages in Tirunelveli district have increased their market share with Thovalai in flower trade. While more than 10000 people are engaged in flower cultivation another 10000 people are engaged in various related activities like plucking, garland making, running retail flower shops, door-to-door selling of flowers etc. in the flower industry around Thovalai. Thus in Thovalai region flower industry is providing livelihood to thousands of people directly and indirectly. But the sad part is that the floriculture industry in Thovalai region does not enjoy the protection and support of the state government or the local bodies.

8. There are innumerable problems crying for attention. There is no special area earmarked for a flower market in Thovalai. The present flower market is operating from a place devoid of any facilities like proper toilets, water taps and weighing arrangements in an area of just 25 cents. There is no protection from rain or shine for the traders. It is really unfortunate that the prices are dictated by extraneous factors like weather. Further as the market especially when the market starts at
5.30 and closes by 8.30 in the morning late entrants incur very serious losses. So it is necessary to improve the transportation facilities available to flower producers. The government must step in and provide these basic necessities with immediate effect.

9. Self-Help Groups should be encouraged to take to the production and marketing of flowers. The Investigator has clearly found out that the problems faced by the farmers and traders are basically related to the marketing of flowers. So he seeks the immediate intervention of the government for opening a full fledged flower market spread over an area of not less than five acres with facilities for cold storage, vans with refrigerating facilities to operate between flower production centres and the flower market and to the nearby airport, electronic weighing facilities, flower protection devices, accommodation for local and foreign merchants and the round the clock water and electricity supply.

10. The Central and State governments have so far focused only on the production side of the flower industry. There can be substantial and perceptible change in the economic and social welfare of farmers only when the governments diverts its attention to the marketing side also. Another area of concern, is the non-availability of quality seeds at Thovalai. The authorities must ensure that the farmers do not have to go as far as Madurai to get seeds. The floriculturists in Thovalai have not had any exposure to the latest techniques of plant breeding and
flower production. Therefore it is mandatory on the part of the Government to popularize the cloning technique for the introduction of high breed varieties of flowering plants noted for their very high yield of flowers in attractive hues, hitherto unknown to Thovalai floriculturists.

**Conclusions**

As it has been found in the introduction chapter the study is purely explorative.

The flower eco system in Thovalai is quite unique and it should be treated as bounty of nature. They should be scientifically protected from environmental hazards. Changes in the size of the existing flower market and improvements on the channels of marketing available to flower farmers is a must to regain the reputation enjoyed by Thovalai in flower production, during the glorious periods of the Maharajas of the erstwhile princely state of Travancore Cochin.

The investigator is quite optimistic that this piece of research would provide enough food for thought for innovative researches and can render it a major tourist attraction with a host of new varieties of aromatic and lovely flowers.