CHAPTER II

OBJECTIVES, MATERIALS AND METHODS

Materials and methods occupy a place of predominant significance in any dissertation. The areas covered under them would include a clear portrayal of the nature of the study a clear statement of its basic objectives, the hypotheses sought to be verified in the courses of the study the methods of data collection proposed to be adopted the statistical and mathematical models with which the analysis and the data collected could be use the analysed and interpreted.

2.1 Objectives of the Study

One of the major prerequisite of any explorative study is a clear statement of the objectives. These objectives will give a sense of direction to the investigator. The investigator strongly feels that the following seven objectives would assist the investigator in carrying on his study along proposed lines.
1. To examine in detail the ecological features of Thovalai which have had a direct bearing on its floriculture industry.

2. To conduct a detailed study on the nature of flower cultivation in Thovalai which will bring out how the protocol such as field preparation, manuring, irrigation, plant protection and harvesting are addressed.

3. To examine statistically the growth trends of flower production in Thovalai.

4. To delve deep into the cost structures and resource use efficiency for every kind of flower produced in Thovalai.

5. To conduct detailed study of the marketing channels and the marketing strategies known to the flower producers in Thovalai region.

6. And to resort to the flower producers in Thovalai region for a performance and evaluation of the floriculture industry in Thovalai.

2.2 Nature of the Study

The study conforms in principle to explorative researches. It consists of three important phases which include 1) an historical phase; 2) a diagnostic phase and 3) a prognostic phases.

In the historical phase efforts would be made to make a comprehensive study of the historical aspects of the problem on hand. It involves very serious efforts to study the historical records available about floriculture. The information obtained would be edited and marshaled with
chronological sequence. During this part of the study the investigator has to visit archives and libraries of repute.

The second phase is called the diagnostic phase. This constitutes, the most important part of the thesis. The investigator should necessarily delve deep into every variable connected with the problem and collect all the relevant data needed for designing statistical and mathematical models. These models would bring to lime light the various dimensions of the research problem under consideration and the way they could be dealt with. The investigator is called upon during this phase to conduct a statistical enquiry into the various dimensions of the floriculture industry by resorting to a suitable sampling technique.

As far as the present study is concerned, the investigator proposes to resort to the time tested and oft used stratified random sampling technique. At the outset the population under study would be divided into three strata, which include the large farmers, medium farmers and small farmers. Then from each stratum twenty samples for large farmers, thirty samples for medium farmers and 50 samples for small farmers would be drawn at random for each flower. Thus, the investigator would get 1000 (10 x 100) samples for the purposes of a statistical enquiry. These samples would be subjected to a thorough statistical enquiry with a carefully designed schedule. The data obtained would be edited, processed, analyzed and interpreted by a careful use of certain statistical and mathematical models.
The third phase is called the prognostic phase. It involves a statistical projection of how things in the floriculture industries in Thovalai region would be during the years to come. Here again, the investigator proposes to resort to certain well known statistical projection techniques.

2.3 Techniques for Analysation and Interpretation

2.3.1 Regression Analysis

Regression analysis has been used to study the trend and also to measure the growth rate of production, simple linear regression model and semi-log linear regression model have been used. Further, multiple regression analysis has been used to fit the production function of cob-Douglas form. The estimated regression co-efficient have been tested for their significance, against the null hypotheses that the value of regression co-efficient is zero, by using ‘t’ test.

2.3.2 Production Function

The relation between factor services used as inputs in the productive process and the quantity of output obtained can be expressed in functional rotation as follows.

\[ Q = f (X_1, X_2, \ldots, X_n) \]

Where Q is the quantity produced per period of time and X1, X2, \ldots, Xn are the quantities of ‘n’ different factors of production. This relation between inputs and output is usually referred to as the production
function. The production function depends solely on technical conditions. It describes the purely technological relation between what is fed in by way to inputs of factor services and what is turned out by way of product.

2.3.4 Cost and Revenue Analysis

A cost and revenue analysis of the floriculture industry in Thovalai will be made to assess the profitability, average return on investment, cost components and share of revenue, resource use efficiency.

2.4 Hypotheses

In any research whether it is explorative or innovative hypothesis verification forms an integral part. It is in the light of the hypotheses verified that the investigator usually evolves concepts and theories which would facilitate the growth of research in floriculture along such line.

The following three hypotheses would be verified in the course of the present study.

1. The ecological complex of Thovalai is such that it is specially suited for flower production.

2. Flower production is more profitable than the production of coconut, banana and paddy in Thovalai.

3. The existing flower market of Thovalai is major stumbling block for the growth of floriculture in Thovalai.
2.5 Need for the Study

An economic study of the flower production and marketing in Thovalai has gained significance for a number of reasons. They can be explained as follows.

2.5.1 Conceptualization Need

In applied economics, concept formulation or conceptualization is a task of prominent significance. As for as rural industrialization in India is concerned, what is absolutely essential is, conceptualization about the variety of industries a village should seek to foster. In Thovalai the attempts of industrialization made hither to by the government and the non-governmental agencies have been far from satisfactory. The main reason for this state of affairs is that a suitable concept of industrialization in Thovalai has not yet been formulated. An economic study of the floriculture in Thovalai will be of considerable use in formulating a clear concept of rural industrialization. Thus it is unequivocal that the process of conceptualization about rural industrialization suited for Thovalai will be accomplished meticulously with the help of an explorative research on floriculture.

2.5.2 Need for Fact Finding

A fact-finding research on the economics of floriculture is necessary to find out the nexus between the ecological factors and the localization of floriculture in Thovalai. Ecological factors such as soil
conditions, climate, availability of steady supply of water, availability of labour, transportation, and flower market facilities generally influence the growth of floriculture industry. The problem which confronts us here is to find out the ecological factors which directly influence the floriculture industry in Thovalai. The identification of the ecological factors stimulating the growth of floriculture industry through a systematic and scientific method will be of help to the government in designing policies intended to nurture the growth of such factors.

2.5.3 Need for Measuring the Income and Employment Generating Potentials of the Floriculture Industry

The floriculture industry has contributed sizably to the growth of employment opportunities in rural areas. Hence it would be quite appropriate to find out with a high degree of accuracy the employment potentials of the floriculture industry in Thovalai.

2.5.4 Need for Assessing the Economic and Social Significance of the Floriculture Industry

As far as Thovalai is concerned the floriculture industry has been responsible for the economic and social well being of people in certain regions. A careful study of the economic and social charges brought about by the floriculture industry would be of great significance in assessing the significance of the floriculture industry. Therefore an economic study of the floriculture industry in Thovalai is found to be quite indispensable.
2.5.5 Need for a Critical Evaluation of the Current Rural Industrial Policy and the Evaluation of a New Industrial Policy Suited to the Rural Areas of Thovalai

It is a well-known fact that Thovalai constitutes one of the most industrially backward regions in the whole of Tamil Nadu. Hence it is quite necessary to evaluate the industrial policy of the Government of Tamil Nadu on the basis of its physical, financial and technical feasibility as applied to Thovalai. Further the need of the hour is to evolve an industrial policy suited to regions like Thovalai. One of the pre-requisites for such an essential task is to find out the problems and prospects of the prominent industries. A study of the floriculture industry which is considered to be one of the most popular and flourishing village industries in Thovalai will be of enormous use to the government in fending out its basic demands. This would go a long way in guiding the government to evolve a suitable rural industrial policy. Therefore an economic study of the floriculture industry in Thovalai is found to be quite imperative.

2.6 Limitations of the Study

A pilot study of the floriculture industry under taken with a view to acquire some basic knowledge about its structure and functioning has made it clear to the investigator that the following limitation will have to be got over, with dexterity, for the successful completion of the thesis.
2.6.1 Inadequate Secondary Data

The secondary data available about the floriculture industry are quite inadequate for research purposes. Hence to make a time series analysis of the progress registered by the floriculture industry the investigator should visit the Horticulture department and find out from the files of the Horticulture officer and the Deputy Director of the Horticulture Department statistical information about the growth of the floriculture industry.

2.6.2 Interviews

The interview method is used to collect the primary data about the floriculture industry. Generally speaking it is rare to come across people who will be honest enough to give correct facts and figures about their wealth monthly or annual income, average annual turnover of their production and marketing and the value of capital stock they have been able to accumulate.

So the investigator should handle each informant according to his temperament and try to get as much information as possible through a policy of persuasion.

However, a high degree of logical consistency in marshalling facts and figures will be maintained in the course of entire discussion on the economic aspects of the floriculture industry.
2.7 Concepts

2.7.1 Floriculture

Floriculture means flower farming or cultivation of flowers and ornamental plants for floral industry. The Indian floriculture industry comprises the flower trade, nursery plants, potted plants, bulb and seed production, micro propagation material and extraction of essential oils from flowers.

2.7.2 Floriculturists or Florist:

The person who is cultivating flowers, ornamental plants and development of plant breeding of new varieties is called as Floriculturist.

2.7.3 Dry Flower

Dry flowers are naturals, dried and preserved using scientific methods.

2.7.4 Traditional Flower or Loose Flower

Traditional flowers are those cultivated under open field cultivation. These include jasmine, Tuberose, Crossandra, Marigold, Bachelors Button, Nerium, Rose, Merjoram, Cocks Comb.

2.7.5 Modern Flower or Cut flower

Modern Flowers are cut flowers are cultivated under protected Green House, Poly House cultivation that is used with long stem. These
include Rose, Gladiolus, Carnation, Lilies, Orchids, Anthurium, Gerbera and the like.

2.7.6 Middle Man

Middle Man is the trader who handles flower between producer and consumer.

2.7.7 Green House and Poly House

Green Houses are framed structures connected with transparent material in which crops can be grown under controlled environment. A plastic or fibreglass cover acts like selective radiation filter, which allows solar radiation to pass through it but traps thermal radiation emitted by objects inside it.

2.7.8 Cloning

Cloning is a scientific method to produce the similar type of flowers with all characters prevailing in perfect condition.

2.7.9 Crop Diversification

Crop diversification means that replacing the traditional crops by commercial crops like flowers and spices for better remuneration.

2.7.10 Post Harvest Management

Post harvest management is a technology to reduce losses and improves the quality and vase life of the flower using various scientific methods.
2.7.11 Value Addition

Value addition means increasing the value of flowers by employing techniques like colouring in white flowers, flower dehydration, flower processing, flower arrangements and the like.

2.7.12 Floral Preservatives

Floral preservatives are chemical formulations used to improve vase-life, size and colour of flowers.

2.7.13 Planting Material

The material from well-known propagators with reputed nurseries and assured of good and disease free future production is known as planting material.

2.7.14 Preservation of Flowers

Preservation of flowers means using different dehydration techniques and stored in dry storages for future usage.

2.7.15 Peak Season and Lean Season

The season when flower rates are doubled and sales are also high is known as peak season and when rates are normal and the sales are regular is known as lean season.

2.7.16 Cold Storage and Dry Storage

Flowers can be stored either wet storage or cold storage and dry storage. In cold storage is commonly practiced to hold flowers for a short duration. In cold storage, flowers are stored at 2-4°C in water or in a
preservative solution. In dry storage, flowers are stored in partially permeable plastic bags to prevent the loss of moisture and to allow limited gaseous exchange during storage. Dry storage can be helpful to hold the flowers for a longer duration.

2.7.17 Floral Preservatives

Floral preservatives are chemical formulations used to improve vase-life, size and colour of flowers.

2.8 Plan of the Study

The study is sought to be planned and executed in the following order.

1. The introductory chapter would contain the exhaustive account about floriculture industry and its contribution to socio-economic growth of the whole country in general and to Tamil Nadu in particular.

2. The objectives, material and methods of the study would be discussed in detail in second chapter.

3. The third chapter contains the review of all related studies.

4. Profile of the study area would be contained the fourth chapter.

5. The fifth chapter contain the detailed study of the natural significance of Thovalai flower with special reference to the cost structure, economics of cultivation.

6. The sixth chapter contains growth trends in flower production.
7. Production function and resource use efficiency in the floriculture industry of Thovalai would be discussed in the seventh chapter.

8. Chapter eight would deal with market and marketing of flowers and the price trends in market over the years.

9. The impact of the floriculture industry on employment generation and socio-economic development of Thovalai would be discussed in chapter nine.

10. A detailed study of problems and prospects of the floriculture industry in Thovalai would be contained in chapter ten.

11. A summary of the discussions held and conclusions arrived would be embodied in chapter eleven.