CHAPTER - 1

INTRODUCTION

1.1 Importance of the study of sericulture

Sericulture industry in Karnataka is of vital importance to the economy of Karnataka in as much as 66 per cent of the total raw silk produced in India is accounted by Karnataka alone. Sericulture has a very high employment potential too. It is ideally suited to generate jobs in the rural areas and particularly in the drought prone areas. It provides part time and full time employment to 60 lakh people in the country and Karnataka's share is more than 18 lakh. Nearly 30 per cent of the people in sericulture belong to the weaker sections of society and also the backward and tribal populations in India. As compared to most agricultural occupations, sericulture is a highly labour intensive occupation. It has the lowest investment-employment ratio. More jobs could be created per unit of capital invested. Research studies corroborate the high employment potential of sericulture.

Apart from its employment potential, sericulture has also the distinction of generating higher incomes. Sericulture is an occupation par excellence in that the returns to it are comparatively higher than most agricultural occupations in the rural areas. The incremental incomes are substantial for sericulture even under rainfed conditions. Sericulture is a very good foreign exchange earner as well.
Sericulture is also important from the point of view of economic development as it significantly contributes towards foreign exchange.

Sericulture plays a major role in a drought-prone area. Only a small proportion of the cultivable area is under irrigation. Therefore, a greater part of the area is subject to drought conditions. As compared to other agricultural crops, sericulture has much to commend itself to a drought-prone area. Mulberry is a drought resistant plant and can be grown in a drought area where soil-moisture is a constraint for plant growth; it can be grown where other plants do not survive. It can survive under the most adverse climatic conditions; other crops may fail but not sericulture. In a drought-prone area sericulture assures at least 2 to 3 crops in a year. Therefore, sericulture has less risk as it assures at least subsistence but stable incomes to the farmers. Because of its income and employment potential sericulture has been included as one of the schemes under the Drought Prone Area Programme since the V Five Year Plan.

The sericulture industry in India exhibits high growth potential and export prospects. Inspite of the tremendous competition posed by the emergence of man-made fibres in recent years, the output of natural silk has registered a steady and significant increase. In the context of the ever increasing global demand for silk and the changing fortunes of the sericulture countries, especially the
withdrawal of Japan from the scene of international trade, India has a very large untapped potential for the expansion of her sericulture industry.

1.2 Relevance of the study to the present day problems

The avowed objectives of planning have not been fulfilled. This has been made clear as early as the Fourth Five Year Plan: “The accent of the socialistic pattern of society is on the attainment of positive goals, the raising of living standards, the enlargement of the opportunities for all, the promotion of enterprise among the disadvantaged classes and a creation of a sense of partnership among all sections of the community” (p.3). It is precisely the failure on this front that has created all the problems which the country is facing today. The present trend is now moving to the other end of the scale exposing the economy to the competitive pressures of globalisation. In this struggle for the fittest, the rural economy is likely to suffer heavily. There is need for stabilizing the rural economy by providing the disadvantaged classes with opportunities of higher and more stable employment and income. Many of the schemes introduced by the government under its ‘garibi hatao’ banner have turned out to be mere palliatives without generating continuous employment and income. In this context sericulture can be recommended. It is an enterprise in which rural population can be continuously and fruitfully employed because of its ever growing market, both national and international, thus resolving the paradox...
“the goods produced by the rural people other than agricultural products have no demand and the goods which have demand, the rural people cannot produce.”

Secondly, sericulture may also arrest rural exodus and thereby, check overcrowding of cities with its consequent problems like housing, sanitation etc.

1.3 The research problem

A large part of the cultivated area in India is rainfed, and even with substantial extension of irrigation it will continue to be so.¹ Rainfed agriculture is characterised by frequent crop failures, low and unstable levels of income and unemployment. These problems are greatly accentuated in rainfed areas that are frequently afflicted with the occurrence of droughts. In India rainfall is very scanty and unevenly distributed and the monsoon is irregular and uncertain. Hence, many parts of the country suffer from frequent occurrences of droughts.

Drought in relation to agriculture is the result of a marked deficiency of moisture-support for crops. While many areas suffer from this condition from time to time, drought-prone area is characterised by its consistence and enormity of short fall. Rainfall and the extent of irrigated area are the two broad objective criteria that are used in identifying a drought-area. An area is prone to drought when both the amount of rainfall and irrigation fall below a minimum norm.
In the drought-prone area the main thrust is to restore ecological balance, soil and moisture-conservation, restructure cropping pattern and stabilize the income of the weaker sections of the community like the marginal and small farmers and agricultural labourers.

The Report of the Task Force on the Drought Prone Areas Programme and the Desert Development Programme (1982) observed, “Research and extension effort, has, till now largely concentrated on irrigated areas. While this might have been important whenever all national food grains production had to be stepped up, it is obvious that a long-term development strategy will have to seek to maximise agricultural production in resource deficit areas.” The statement highlights and directs attention to the need for studies in respect of dry land and drought-prone areas. The drought-prone areas are characterised by low and unstable income, unemployment and high agricultural risk. The incidence of unemployment and poverty is very high in drought-prone areas. The strategy, therefore, mainly consists of a change in cropping pattern that can easily be adapted to drought and dry conditions. The cropping pattern should be both land and water economising and at the same time capable of increasing income per unit of cropped area. The Committee speaking about an appropriate strategy for the drought-prone area gave the guideline “Demonstrations under DPAP should seek to establish techniques of vesting available moisture to the best advantage and of optimising
moisture-conservation. It should be possible in many cases to establish feasibility of a second crop by adjustments in sowing time and the selection of the appropriate crop.\textsuperscript{3}

Sericulture has much to commend itself to ameliorate the situation in drought-prone areas. The Fifth Five Year Plan recommends crops with a deep root system to ensure optimum use of soil-moisture in drought-prone area.\textsuperscript{4} The successive Five Year Plans have underscored the need to evolve and use drought-resistant varieties that stand water-stress conditions.\textsuperscript{5} Sericulture which thrives best in irrigated conditions can easily be adapted to drought-prone area. Mulberry is a deep-rooted hardy and drought-resistant plant. Its water-requirements are far less as compared to other competing crops in the area. The annual requirement of water for mulberry is 36" to 48" compared to 115" for sugarcane, 42" for cotton, 98" for paddy (2 crops) and 35" for hybrid maize.\textsuperscript{6} Once the plant is well established, it can survive for 15 years without much deterioration in leaf yield. One can hopefully depend upon mulberry to yield at least two or three crops in a drought area. Sericulture, therefore, ensures to the farmers at least stable yet comparatively higher income and, hence, greatly reduces agricultural risk.

1.4 Objectives of the study

A number of official and private research studies have been undertaken in respect of sericulture under irrigation. They have shown
conclusively that sericulture thrives best in irrigated conditions and that its incremental incomes and employment are substantially higher as compared to other competing crops in the area. A few studies on sericulture under rainfed conditions have also established its superiority over other alternative crops in the matter of income and employment generation. Since sericulture has been introduced in the drought prone area in Karnataka from 1979 as a result of the ambitious Karnataka Sericulture Project, there is need now for more in-depth studies regarding the economics of sericulture in drought-prone area too. It is more than two decades that the project has been in operation. It is high time that research is carried out to assess whether sericulture ensures stable income and employment vis-a-vis other competing crops or not. But no research seems to have been undertaken to assess the income and employment possibilities of sericulture vis-a-vis other crops in drought-prone area. The present research is an empirical study of sericulture in some selected drought-prone districts in Karnataka to assess the income and employment-generating potential of sericulture vis-a-vis other competing crops. The research study has, therefore, the following objectives:

(i) To study the operational size in sericulture and other competing crops.

(ii) To study the extent of instability of income from sericulture and other crops.
(iii) To study the income generated from sericulture vis-a-vis other crops.

(iv) To study the employment generated in sericulture, especially for female labour, as compared to other crops.

1.5 Hypotheses

The research study aims at testing the following hypotheses:

(i) The modal size of cultivation in sericulture in drought-prone areas is considerably small.

(ii) Sericulture in drought-prone areas has less unstable income as compared to other crops.

(iii) Sericulture in drought-prone areas has higher incremental income as compared to the other competing crops.

(iv) Sericulture in drought-prone areas creates more employment per acre, especially for female labour, as compared to the other crops.

1.6 Research design and methodology

(a) Nature of the research design: A sample survey method is adopted to carry out the research study.

(b) Sample design:

A multi-stage-stratified random sampling method is adopted to select the respondents.
(i) Five districts from North Karnataka are identified as drought-prone districts.

(ii) From each of the 5 districts 3 taluks have been selected at random.

(iii) From each taluk 4 villages have been chosen on random basis.

(iv) From each village 5 respondents have been contacted on random basis.

The following chart shows the method used in the selection of the districts, taluks and villages and the sericulture and non-sericulture respondents.

Chart 1.1: Multi-stage Stratified Random Sampling Method

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KARNATAKA

DROUGHT-PRONE DISTRICTS
(Dharwad, Raichur, Bellary, Bijapur and Gulbarga)

TALUKS

VILLAGES

SERICULTURISTS  NON-SERICULTURISTS
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In all 300 farmers were selected from 5 districts in Karnataka. Table 1.1 sets out the number of respondents selected for personal interview to elicit data.

**Table 1.1: District, taluka and village-wise breakup of selected respondents**

<table>
<thead>
<tr>
<th>District</th>
<th>Total No.of respondents for the District</th>
<th>Taluk</th>
<th>Total No.of respondents for the Taluk</th>
<th>Village</th>
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<td>Hunsikatti 5</td>
<td>Nagenahalli 5</td>
<td>Veerapur 5</td>
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<td>Devagiri 5</td>
<td>Karagund 5</td>
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<td>Gadag 20</td>
<td>Belhod 5</td>
<td>Betigeri 5</td>
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<td>Raichur</td>
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<td>Koppal 20</td>
<td>Budugumpa 5</td>
<td>Kampli 5</td>
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<td>Chikka</td>
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<td>Total No. of respondents for the Taluk</td>
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<td>Yeragoppa</td>
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<td>Total No. of respondents</td>
<td>300</td>
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Notes:
1. On 1st November 1997, new districts were created in Karnataka. Gadag and Haveri taluks from the erstwhile Dharwad district were separated and formed into new districts. Similarly, Bagalkot taluk from the erstwhile Bijapur district and Koppal taluk from the erstwhile Raichur district were separated and formed into new districts. Since the selection of the districts, taluks and villages for the purpose of the present research was already made early in 1996, the old category of districts existing just prior to 1st November 1997, is retained in the present research to facilitate collection, tabulation, analysis and interpretation of data.

2. Since it is the one and same farmer who devotes a part of his land to non-sericultural crops and the rest to sericulture, the number of respondents engaged in sericulture is the same as that engaged in non-sericulture activities. Data on sericulture and non-sericulture is collected from the same farmer.

(c) Secondary data are collected from Sericulture Departments and district taluk offices and other published literature like the books, reports, brochures, pamphlets etc.
(d) Simple statistical tools like graphs, charts, averages and deviations are used to analyse data.

(e) Time frame: The data for the research study collected during 1998-99 refers to a broad period of 9 years from 1990-91 to 1998-99.

1.7 Tools to be used in the collection of data

The necessary data are collected through personal interview method by canvassing a prepared schedule to the respondents. Since the aggregate secondary data does not reflect village and taluka-wise individual details on income, employment, cost of production etc., recourse had to be taken to the collection of data through primary sources.

1.8 Chapter-wise scheme

The present study is divided into six chapters.

Chapter 1: Introduction

The first chapter deals with the importance of the study of sericulture and its reference to the present day problems. The chapter sets out the research problem to be investigated and the objectives and hypotheses of the research study. The research methodology and the tools of data collection are also elaborated.
Chapter 2: Sericulture in the world, India and Karnataka

The second chapter describes the trends in the world raw silk production and accounts for the significant change in recent years in the relative position of the countries producing raw silk. A historical perspective of sericulture-industry in India is attempted and the relative growth of mulberry raw silk production in the leading sericultural States is assessed. The importance of sericulture to the economy of Karnataka in particular and India in general is examined in terms of its contribution to employment, income and foreign exchange earnings. The growth potential and the export prospects of the sericulture industry are evaluated.

Chapter 3: Drought and drought-prone areas in Karnataka

The chapter examines the concept, causes and effects of drought and its occurrence in India and Karnataka. A list of drought-prone districts in Karnataka is presented.

Chapter 4: Instability of farm income and employment

The chapter examines the instability in crop production, agricultural incomes and employment during the post-independence period. The sensitivity of agricultural output to rainfall variations, the use of high yielding seeds technology and infrastructural facilities like irrigation are evaluated. The remedies to fight drought and reduce instability are worked out.
Chapter 5: Generation of income and employment from sericulture and other competing crops

The chapter studies the operational size in sericulture and other competing crops and accounts for the very small size in sericulture. A detailed study is made of the extent of instability of income and employment in sericulture and other crops. A strategy to reduce farm-instability through adoption of sericulture is worked out.

Chapter 6: Findings and Suggestions

A summary of the main findings emerging from the study is presented in the concluding chapter. The main findings of the study are that income and employment from sericulture are comparatively more stable and sericulture has higher incremental incomes. A change in the cropping pattern in favour of sericulture, the use of water-harvesting techniques and provision of adequate extension services, inputs and credit are suggested to achieve a stable yet higher level of farm-income.

REFERENCES


