



## SELF EMPLOYMENT IN SERICULTURE THROUGH COOPERATIVE CHAWKI REARING CENTERS - AN ECONOMIC ANALYSIS

D. Chandrappa, <sup>a</sup>Ramakrishna Naika & <sup>b</sup>B. Sannappa\*

Krishi Vigyan Kendra, UAS (B), Baggur Farm, Hiriyyur,

<sup>a</sup>College of Sericulture, UAS (B), Chintamani – 563 125.

<sup>b</sup>DOS in Sericulture Science, University of Mysore, Manasagangotri, Mysore – 570 006.

### ABSTRACT

Sericulture being the most labour intensive agro-based industry and considered as a model for self-employment and to uplift the economically poorer sections of the society in the developing countries like India. Rearing of young age silkworms (chawki) is an important stage in silkworm rearing which contributes a lot to the success of crop. The analysis revealed that chawki rearing centres have realized Rs. 6068.28 net return per crop and a return of Rs. 1.13 for every rupee invested within a short period of 8-10 days / crop. The concept of cooperative chawki rearing centres, their cost-returns structure and factors responsible for success in relation to self employment are furnished in this article.

**KEY WORDS:** Sericulture Chawki rearing centres, Cost return structure, Self employment.

### INTRODUCTION

Sericulture is considered to be an enterprise which has both agricultural and industrial aspects. It is one of the important economic activities in developing tropical countries like India. Sericulture is an ancient industry in India as in China, Japan and Korea and India ranks today as the second largest producer of raw silk in the world. The work participation rate is quite high in sericulture. Eventhough the transformation of sericulture from a traditional art to a modern scientific technology is of recent origin, it has been practiced in India from ancient years, as evidenced by Indian literature and history. The importance of sericulture in the developing countries like India is because of its effectiveness in utilising the family labour, especially the women. Developing countries in Asian and African regions have considerable potential for sericulture as a foreign exchange earner. Sericulture in India is considered as sustainable farm based economic enterprise possibility favouring the rural poor in the unorganized sector because of its relatively low requirement of fixed capital and higher returns on investment. Several socio-economic studies have affirmed that the benefit-cost ratio of sericulture is highest among comparable agricultural cash crops in the country (Joy omen, 2000). The analysis of the trends in international silk production reveals that developing countries have better prospects for growth in sericulture than that in the advanced countries. Being an agro-based rural industry, sericulture is highly suitable to the countries having an agricultural base and problems of providing employment to the rural landless labourers. Sericulture is suited well to the countries where unemployment is a major problem and the cost of labour is not high

### Employment Potential

In India the labour intensive nature of sericulture industry is seen as strength and not weakness, as it provides

employment to millions, especially in rural areas. Sericulture generates a higher income and employment per unit area and ensures a continuous and assured flow of income to the farmer throughout the year. The changes in employment and income opportunities in rural areas may be brought about by selecting a highly labour intensive and high income generating cropping system and sericulture has been identified as one such sector which plays a vital role in generating gainful employment opportunities to the villages (Ahsan, 2000). Sericulture is providing stable income to many rural agricultural families and a livelihood to scores of landless farm and non-farm women labourers giving much economic strength. It is estimated that sericulture offers employment to around six million persons in India who are predominantly from the weaker sections of the society. The labour requirement in sericulture is more than four times that of paddy and five times that of ground nut (Ramathulla and Geethadevi, 2000). It is also estimated that one hectare of land provides employment to approximately 10 persons throughout the year in various activities of sericulture industry and so sericulture can be considered as a model for self employment and to uplift the economically poorer sections of the society in the developing countries like India (Ramakrishna Naika and Reddy, 1995). The benefit of sericulture has motivated the policy makers, administrators, extension workers and scientists to popularise the industry throughout the country in an attempt to find solutions to the rural unemployment and low per capita income.

### Cooperative Chawki Rearing Centers

The concept of cooperative chawki silkworm rearing centers though originated in Japan is not a new to Indian sericulturists. The success in quality silk cocoon production depends on many factors including the care taken during early instar rearing. The chawki worms (first

and second instar) are very sensitive to the climate, hygiene and rearing conditions providing of which is very difficult at individual farmers level in rural India. In cooperative chawki rearing centers the worms will be reared upto second instar under well managed hygienic conditions providing the specific requirements of chawki worms. Such worms will be procured by the sericulture farmers to rear further in their rearing houses. Technically the advantage of CRC's is to provide optimum rearing conditions, hygiene, labour saving and to ensure right nutrition and care as well as prevention of silkworm diseases. Further, this arrangement is also expected to ensure about 10 days rest to the individual rearers and the time saved can be employed in disinfection and other economic activities. Initially, the Government of Karnataka started CRC's and later have been handed over to private entrepreneurs (Acharya *et al.*, 1993; Krishnaswami, 1990). Considering the advantages of chawki worms the dependence of commercial cocoon rearers has increased in recent years especially in the traditional sericultural areas of Karnataka. Kolar the leading sericulture District of Karnataka alone is having about 248 cooperative CRC's (Sandhya Rani, 1998). The

popularity among farmers and attractive profit made many individuals especially the young generations to start cooperative CRC's.

#### Economic Analysis

The empirical analysis on investment feasibility and economics of CRC's in Kolar District of Karnataka state revealed that the total initial investment required for establishing a CRC of 15,000 DFLs capacity was Rs. 3,12,400. The total cost incurred inclusive of both recurring and non-recurring was Rs. 48,031.72 / crop of which the expenditure on chawki rearing alone constituted 98.62 per cent (Table 1). The CRC's have revealed on an average Rs. 54,100 gross returns per crop with a net return of Rs. 6068.28. The benefit ratio also looks attractive (1:1.3) as the returns are realised within a short period of about 10 days. The CRC's earn reasonably good amount of profit of Rs. 39.79 / 100 DFLs crop. From the point of view of investment feasibility of CRC's it is found that they realised a return of Rs. 1.13 within a short period (8-10 days / crop) for every rupee invested (Umesh *et al.*, 2000).

TABLE 1: Cost-return structure of chawki rearing (15,000DFLs)

|           | Particulars                                                  | Per crop (Rs.)          |
|-----------|--------------------------------------------------------------|-------------------------|
| <b>A.</b> | <b>Total Cost</b>                                            | <b>48031.72</b>         |
| 1.        | Non-recurring cost (Investment on rearing house & equipment) | 591.07                  |
| 2.        | Interest on non-recurring cost (@ 12%)                       | 70.93                   |
|           | <b>Sub Total</b>                                             | <b>662.00 (1.38)</b>    |
| 3.        | Recurring cost (Expenditure on chawki rearing)               | 47181.00                |
| 4.        | Interest on recurring cost (@ 12%)                           | 188.72                  |
|           | <b>Sub Total</b>                                             | <b>47369.72 (98.62)</b> |
| <b>B.</b> | <b>Total Returns</b>                                         | <b>54100</b>            |
| 1.        | Chawki worms (@ Rs. 360 / 100 DFLs)                          | 54000                   |
| 2.        | Manure (Cart loads)                                          | 100.00                  |
| C.        | Net returns                                                  | 6068.28                 |
| D.        | Cost per 100 DFLs                                            | 320.21                  |
| E.        | Purchase price of 100 DFLs                                   | 240.00                  |
| F.        | Net additional cost incurred for chawki rearing              | 80.21                   |
| G.        | Service charge for 100 DFLs chawki                           | 120.00                  |
| H.        | Net profit earned per 100 DFLs                               | 39.79                   |
| I.        | Return per rupee of investment                               | 1.13                    |

Interest on expenditure per crop only is considered as capital is not invested at once.

Values in parenthesis indicate percentage of total cost.

It is doubtless that cooperative chawki rearing centers can serve as a good base for self-employment. But, it failed to spread at the desired scale due to various reasons. The popularity and efficiency of CRCs can be increased by following some measures like distribution of exact number of worms per each disease free laying, having scientifically managed separate mulberry garden for chawki, distribution of cost effective and simple container to transport chawki worms, providing effective disinfectants, regular visit to the rearers field and getting feed back information, organising technical meetings involving the subject matter specialists and providing solutions to the farmers queries etc. Thus cooperative chawki rearing centers can be considered as a model for self-employment especially to the rural youths and self

help groups including those of women. In addition to earning self it also helps to provide employment to others.

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