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Sericulture - An Micro Enterprise as a Source of Livelhood of The Rural Poor – A Case Study of The Drought Prone Area of Anantapur District of Andhra Pradesh

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ABSTRACT

Sericulture is an important source of economic activity of the rural poor in the Anantapur district of Andhra Pradesh. It acts as an alternative source of income and employment for them. Sericulture is one of the integral parts of Indian agriculture. Marginal farmes are practicing sericulture as their livelihood where as poor and landless farmes have been either working as independent weavers or masters. Being an agro- based industry it is highly suitable to the Indian people where large proportion of them war jobless, landless and laboures. This activity mainly a labour intensive programme requiring relatively low investment and acting as a source of survival and high profit earner. This study is an attempt is made to highlights the micro enterprise for livelihood of rural poor people in Anantapur District of Andhra Pradesh state. The major findings of this study is majority of them were not in a position to avail a bank loan for entrepreneurial activities due to various reasons. Hence all possible assistance should be extended by the concerned agencies. Large proportion of consumer price is spread ranging form 34 to 64 per cent it is accounted for middlemen with minimum risk, measures should be initiated to ensure that farmers and weavers who also more risk beares get thier due share. Hence, interventions like promotion of self hello groups to meet the mircor - financial require¬ment for value additions and provisions for sophisticated cost efficient value addition technology should be initiated by the Government, Social Workers and NGOs. Market linkages through weaver cluster formation etc will enhance the benefits to the weavers.

KEYWORDS

INTRODUCTION

The reduction of rural poverty continues to be a paramount goal of the developing countries like India as the majority of the poor population still resides in the countryside. The World Bank, for example, estimates that more than 70 % of the world's poor live in rural areas. So far, various strategies have been pursued to address this concern and among the major ones is rural employment creation. Sericulture is one of the major agro-based activities which can provide gainful self-employment for poor families in rural areas on their own land. It is an enterprise with a very short gestation period, having the potential to generate adequate returns from a very small piece of land. However, lack of irrigation potential, depleting ground water and high initial investment costs limit large-scale adoption of sericulture as a livelihood option for the majority of poor families. Sericulture involves different steps: 1) the cultivation of mulberry gardens as mulberry leaves are the only feed for silkworms, 2) the construction of a shed to ensure specific climatic conditions (humidity of about 75-80% and a minimum temperature of 27°C). The whole process from egg to cocoon takes one month.

Sericulture has been a profitable business for irrigated farms in the state of Andhra Pradesh for some time and some farmers of the project target group had heard of this practice. However, they didn't have the opportunity to engage in sericulture activities as the irrigation systems that are needed to cultivate mulberry in dry conditions were neither in place nor financially feasible. Although some farmers knew the basic steps involved in sericulture, there was also a lack of mulberry cultivation and silk worm rearing skills. In addition, there was a lack of appropriate soil moisture conservation skills and technologies which resulted in an under-utilization of rain water, an exploitation of ground water and severe soil erosion. Under these conditions, the number of crops that could be cultivated was restricted to a few unprofitable ones (green gram, finger millet, paddy, horse gram, and fodder jower) and were mainly produced for subsistence. During the dry season farmers depended on off-farm labour. Poverty was widespread among the families in the project area.

Sericulture is one of the integral parts of Indian agriculture. Being an agro-based industry it is highly suitable to the Indian rural people where large number of people are jobless, landless and labourers. It is mainly a labour-intensive programme requiring relatively low investment and acting as a source of survival and high profit earner. And it also accounts for a sizable quantum of foreign exchange earnings. An attempt was made to study the contributions of a Silk production Micro-Enterprise, for livelihood of rural people of select villages in Anantapur district of Andhra Pradesh State. Sericulture is an important economic activity of marginal and landless farmers (rural poor) in the drought prone area of Rayalaseema region of Anantapur district in Andhra Pradesh.

Historical perspective

Sericulture is both an art and science of raising silkworms for silk production. Silk as a wearable fiber was first discovered by the Chinese empress Xi Ling Shi during 2,640 B.C. and its culture and weaving was a guarded secret for more than 2,500 years by the Chinese. Silk was a profitable trade commodity in China. Traders from ancient Persia (now, Iran) used to bring richly colored and fine textured silks from Chinese merchants through hazardous routes interspersed with dangerous mountainous terrains, difficult passes, dry deserts and thick forests. Though, commodities like amber, glass, spices and tea were also traded along with silk which indeed rapidly became one of the principal elements of the Chinese economy and hence,

the trade route got the name 'silk route'. Even today, silk reigns supreme as an object of desire and fabric of high fashion. Being a rural based industry, the production and weaving of silk are largely carried out by relatively poor sections of the society and this aspect of sericulture has made it popular and sustainable in countries like China and India.

PRESENT STATUS

India is the second largest producer of raw silk after China and the biggest consumer of raw silk and silk fabrics. An analysis of trends in international silk production suggests that sericulture has better prospects for growth in the developing countries rather than in the advanced countries. Silk production in temperate countries like Japan, South Korea, USSR etc., is declining steadily not only because of the high cost of labour and heavy industrialization in these countries, but also due to climatic restrictions imposed on mulberry leaf availability that allows only two cocoon crops per annum. Thus, India has a distinct advantage of practicing sericulture all through the year, yielding a stream of about 4-6 crops as a result of its tropical climate.

In India, sericulture is not only a tradition but also a living culture. It is a farm-based, labour intensive and commercially attractive economic activity falling under the cottage and small-scale sector. It particularly suits rural-based farmers, entrepreneurs and artisans, as it requires low investment but, with potential for relatively higher returns. It provides income and employment to the rural poor especially farmers with small land-holdings and the marginalized and weaker sections of the society. Several socio-economic studies have affirmed that the benefit-cost ratio in sericulture is highest among comparable agricultural crops (Table 1).

Table 1: Cost-Benefit analysis of mulberry sericulture and other competing crops.

Item	Mulberry sericulture	Sugarcane	Turmeric
Total input costs	48,659	30,575	29,610
Gross returns	96,132	60,200	55,317
Net returns	47,476	29,625	25,707
CB ratio	1:1.98	1:1.97	1:1.02
Crop period	1 year	1 year	4-5 months

Note: Data in Rs/acre/annum
Source: Dandin et al., presented at the 20th Conference of the International Sericulture Commission, Bangalore, December, 2005

Sericulture is a commercially sustainable farm based economic enterprise favouring rural poor in the unorganized sector, because of its relatively low requirement of fixed capital and high returns. Government of Andhra Pradesh has created basic infrastructure support to sericulture. Today high quality of cocoons and silk yarn produced are compatible to the industry standards. Natural silk varieties i.e., Mulberry, Tasar and Eri are grown in the State. In India, the growth of mulberry raw silk production from 8100 mts in 1970 to 3,500 mts in 1994. Currently, the domestic demand for silk, considering all varieties, is nearly 25,000 MTs, of which only around 18,475 MTs (2006-07) is getting produced in the country and the rest being imported mainly from China. Indian domestic silk market has over the years been basically driven by multivoltine mulberry silk. In India, sericulture is practiced in more than 52,000 villages. Now, it has expanded from the traditional States of Andhra Pradesh, Karnataka, Tamilnadu and Jammu &. Kashmir to almost all the states. With the commercialization of farming in India, sericulture has emerged as one of the most competitive agro based enterprises and several corporate bodies have shown interest in this sector. India occupies the second position in the world scenario of the mulberry raw silk production. Nearly one-sixth of the world production of mulberry raw silk comes from India.

SERICULTURE AND NATIONAL ECONOMY

In India, sericulture related activities ensure the livelihood security of over six million families spread over in some 59,000 villages across the country. The silk sector is also a valuable foreign exchange earner for the country. The export opportunity to double the export earnings with the free trade atmosphere in Europe and USA. It is estimated that India needs 25,000 MT of raw silk per year to meet its domestic requirement. The growing demand of silk in the domestic market can make the industry a valuable enterprise which in turn can provide employment for the rural masses ensuring assured economic returns at the individual family level.

ANDHRAPRADESH

Andhra Pradesh is the second largest producer of mulberry silk in the country, where as in the Tasar silk production, the state occupies 4th place and Ericulture is in the takeoff stage. Suitable agro climatic conditions and enterprising farmers helped the growth of the industry. The rich silk heritage of the state with its living fabrics from the looms in Pochampally, Gadwal, Dharmavaram and Narayanpet propelled the growth weaving industry - a very strong forward linkage to the reelers and farmers. The state is endowed with 37,000 ha under mulberry crop, covering 1.00 lakh farmers.

The sericulture sector contributes 0.8% to the GSDP of the State and employees 4.62 lakh persons under its various activities. Several socio economic studies indicate that the cost benefit ratio of sericulture is the highest among comparable agriculture crops. Mulberry crop in 37,000 ha covering 1.00 lakh farmers 3000 Tassar farmers in the tribal pockets earning an average income of Rs.15,000/- annually. 5,000 Ericulturists in the telangana region earning an additional income of Rs.6,000/- annually over and above the incomes earned on Tapioca and castor. 5125 mt of annual silk production 324 Silk weavers cooperative societies servicing 3500 of members. 4.62 lakh persons are employed. Average bivoltine production is 55 Kg for 100 dfls.

A farmer on an average, on a two and half acres piece of land with a total cost of Rs. 53250 (61 per cent of which is labour cost) can realise Rs. 93600 (76 per cent return on total cost) from sericulture cultivation whereas with a total cost of Rs. 23680 (49 per cent of which is labour cost) only Rs. 27000 (14 per cent return on cost) can be realized from paddy cultivation. As the area is drought-prone, the poor farmers preferring sericulture to paddy, and the other supply chain members like weavers and other value adders especially women, who are largely involved in the supply chain are, in need of financial and capacity building (for maintaining quality and effective designing) assistance, hence all possible assistance should be extended by the concerned agencies.

A large chunk of consumer price spread ranging from 33.3 to 66.7 per cent, is accounted for middlemen with minimum risk, measures should be initiated to ensure that farmers and weavers who are also more risk bearers get their due share. Most of the weavers cannot access the banks for loans for entrepreneurial activities due to lack of physical collateral. Hence interventions like promotion of SHGs to meet the micro-financial requirement for value additions and provision for sophisticated cost efficient value addition technology, should be initiated by Government and NGO agencies. Market linkages through weaver cluster formation etc., will enhance the benefits to the weavers.

Sericulture is providing employment to more than six millions of persons mostly belonging to the weaker sections of the society. Sericulture is an agro based labour intensive and low investment rural industry. It plays a pivotal role in improving the economic conditions at a faster rate as the industry starts yielding income during the first year itself. Higher investment during the initial years, low credit supply. Lack of technical inputs, less knowledge and lack of awareness among farm-

ers, poor infrastructures etc are proving to the bottlenecks for the growth of sericulture industry in India. Several non-governmental organizations and banking institutions are striving for the promotion of sericulture industry, but the rate of success is not of a high order. Despite this, is nor able to mitigate the problems of rural poverty. In Andhra Pradesh, the case is no exception to this. Hence, the present study an attempt is to made to analyze the role of sericulture an micro enterprise in rural livelihood and poverty alleviation programme and also this study examine the marketing linkages, efficiencies and also price spread at different levels of marketing of sericulture products.

OBJECTIVES OF THE PRESENT STUDY

The major objectives of the present study are 1.To identify the market channels, market systems, cost benefit analysis and the price spread for each actor involved in sericulture industry; 2.To find out the marketing efficiencies of various market channels; 3.To identify the prospects and constraints for the promotion of sericulture industry for rural employment and poverty alleviation and 4.To analyze the returns of sericulture vis -a -vis agriculture.

METHODOLOGY OF THE PRESENT STUDY

The study utilized both primary and secondary data. Survey of the stakeholders of silk industry for collecting the primary data was carried out in Anantapur district of Andhra Pradesh. Anantapur district being a drought prone region, sizeable population is engaged in this business for their livelihood, the study has followed a participatory approach in collecting the data. The stakeholders of th sericulture industry were identified in consultation with the banking and NGOs personnel working for the promotion of sericulture industry. Weavers and retailers, stakeholders, cocoon producing farmers, rulers were identified as the stakeholders of the sericulture industry. The semi-structure questionnaire was also used to collect the data from each stake holder. Each stakeholder has taken purposive sampling technique is used. A dual approach was used in analyzing and data interpretation. This implies use of both quantitative and qualitative methods of analysis may be used for the study Secondary data were obtained from journals, books, reports etc. Simple statistical tools such as frequency and percentages were used for the study.

Anantapur district comprises of 59 mandals of the total total area under sericulture in this district Dharmavaram, Puttaparthi, and Penugonda mandals together more than 30 percent. Hence these three mandals were chosen for the study. List of the villages from these three mandals were obtained. Semi structure interview and Participatory rural Appraisal (PRA) techniques were employed to collect the data The total sample size of the respondents was 43. Out of 43, 9 are farming units, 5 are reeling units, 18 are weaving units, 7 are retailers, and remaining (4) wholesaler.

GENERAL CHARACTERISTICS OF THE RESPONDENTS

Characteristics of weaving system in the study area

Table-2

Number of Weaving Machines	Less than 2	3-5	More than 6	Total
Respondents	5	1	6	18
Type of Weaving machine				
Handloom	4	10	-	14
legloom	4	-	-	4
Number of Employees				
Self Employed	5	2	1	8
Wage employed	3	4	4	10
Annual Turnover				
Less than Rs 25,000	2	1	3	6
25,000 to 50,000	2	3	3	8
More than 50,000	1	1	2	4
Production capacity (per month)				
Upto 2 sarees	2	2	2	6
2-10 sarees	2	3	3	8
More than 10	-	2	2	4

In the study area, 43 weaving units were selected purposively for the study of the weaving system and analysis of the cost benefits. The sample characteristics of the weaving system are presented in Table -1 most of the respondents have less than four looms (70 percent). This implies that people as operating the looms by themselves and using the family labour also. Some had hired waged labourers for looming purpose. the owners have more than five loomes employed waged labourers from the village. The labourer is given a contract to complete the task and paid on the task of if only. The people who have taken up silk weaving as a secondary occupation have an annual turnover less than Rs. 25,OQO/- and the production of sarees is less than two. Most of the weavers have made sari weaving a source of livelihood. Otherwise the turnover, is more than Rs 25,00 in all cases.

On the basis of the above characteristics, silk weaving is organized under three basic systems. The weakness of independent weaving is largely a function of a fragile financial base combined with lack of information about development in the market. This has resulted in the strengthening of master weaver/trader system and in poor returns in the weavers as job workers or wage earners. The average cost of the sari reckoned to be Rs 1450 that give the weavers a mean profit margin and Rs 150. Thus, these families who could make two saris a month would get Rs 300/- as supplementary income, because these weavers simultaneously undertake other works like agriculture laborers. Thus , the families still got sustenance and survival.

Table-3,Characteristics of Silk Production System

Characteristics	Independent	Master weaver	Co-operative
Risk bearer	weaver	Master weaver	Members
Weaver employement	Self Employed	Contract labour	Contract
periodicity	Seasonal	Largely seasonal	Regular
Hours of work	10-14 hrs	12-14 hrs	10-12 hrs
Place of work	home	Worksheds/ home	Home
Looms	1-3 looms	4-8 looms	9 and above
Ownership			
Source of funds	Own funds	Own funds, private and bank	Cooperative bank
Financial position	Very weak	Very strong	Suspect
Managerial capabilities	Good	Excellent	suspect

MARKET INFORMATION

The main market centres of silk thread are Dharmavaram (20 Kilometers away from the Bangalore city). The entrepreneur carries these products by bus of the bicycle. They are taken by bicycle if the products are to be sold at Dharmavaram whereas they are taken by bus in case of Bangalore. The market price of silk varies from Rs 1200 to 1300 per kg depending upon the quality. Foreign companies come to the door step to collect the by products at the rate of Rs 150 per Kg, It is used for further extracting of silk. The market competition is very less, it is easy to sell silk thread compared to cocoons.

LINKAGES

The independent weavers collect the raw materials from the

retailers or wholesalers from Dharmavaram to weave the saris. They charge Rs 350/- per sari for weaving. The cooperatives supply the silk raw material as well as collect the saris as they prepared and the amount is shared on the basis of the number of saris prepared. Master weavers directly purchase the silk thread from the market and supply the woven saris. The poor and independent weavers face problems of raw materials shortage. For instance, they even had to give security to collect silk. Most of the independent weavers has taken loand either from the villagers or from the moneylenders or banks for the purchase of loom. On an average, a loom cost around Rs 25,000/- it is a costly business for the poor. Hence they prefer to work as wage earning weavers rather than owning their own looms. The main market centres of saris are Dharmavaram, Anantapur and Bangalore. The independent weaves sells saris from where he fetches in market centres and wholesalers from where, they can get more profit. The market price of sari varies from Rs 1700 to 10,000/- depending upon the quality of the sari. The price of saris increases almost 20 to 80 percent as it crosses each level of market. Table-4 Presents the profit margin of different sales agents of saris. The weavers get less profit while high risk is involved in selling the products. This table clearly shows that the price spread of silk sari as percentage, of each channel member both in terms of cost spread and profit margin spread with and without exporter. It was assumed that a sari can be sold to consumer at both wholesaler and retailer levels. It can be inferred that the weaver share is cost spread is 62 percent and profit spread 18 per cent when sold in domestic market. Further the weaver share in cost spread is 22 percent and that of profit spread just 3 percent when sold in export market. It can be concluded that the profit spread is minuscule when sold in foreign markets.

Table-4. Price of the Cheapest Dharamvaram Sari at different market levels

Enterprise	Cost price (Rs)	Sale price (Rs)	Profit-margin (Rs)	Risk involved
weaver	1500-1700	1900- 2000	200-300	High
Wholesaler	1700-2000	2400-2700	400-700	Less
Retailer	1600-1900	2100-2400	200- 400	Less
Exporter	2200-2600	5000-10,000	3000-7000	High

The above table shows price of the cheapest Dharamavaram saries at different market levels that is at production level (weaver level) at wholesaler level, at retailer level and the exporter level.

CONCLUSION AND RECOMMENDATIONS

In the new millennium, Sericulture has become major role to play to eliminate to poor people. Sericulture is an important economic activity of the rural poor in the Anantapur district of Andhra Pradesh. The sericulture industry is unique for more than one reason. It is based on agricultural output viz., cocoons and cottage based labour intensive in nature. The industry comprises of reeling, silk preparatory and weaving, silk knitting, silk wet and processing consisting of degumming, dyeing, printing and finishing besides garment manufacturing. These activities in turn support the ancillary enterprises of marketing, manufacture and by-product utilization comprising of spun silk yarn manufacture and papae oil extraction. Thus, a lot of value is added to the product at each stage of the industry. It acts as an alternative source of income and employment for them. Sericulture farming has not only provide income and employment to the rural poor but also has given them better returns. Marginal farmers are practicing the sericulture for their livelihood whereas poor and landless farmers have been either working as independent weavers or master weavers. Most of the independent weavers have taken up weaving as a side occupation. Women and children are largely employed in the weaving activity. It helps them to generate additional income of the respondents.

The landless poor farmers are earning their livelihood by working as wage labour in reeling or weaving or as master weavers. Most of the poor farmers are not able to bear the cost of looms. Hence loan and subsidy must be provided to landless farmers for purchasing the looms. Similarly, training on weaving and loom maintenance must be provided for sustainability of the activity. Marginal farmers are shifting towards sericulture rather than agriculture. Marginal farmers should be encouraged to go in for sericulture in drought prone areas like Anantapur. Hence, extension and research support for sericulture must be strengthened. The district is very labour intensive as 61 percent cost of cocoon production is accounting for labour cost component, thus contributing substantially for income generating activities to rural poor and marginal farmers also. In Sericulture industry women are employed to a greater extent when compared to men as most of the activity in sericulture is carried out indoor work. Hence, due to the consideration must be given to address the needs and problems of women working in this sector.

The wholesalers and retailers enjoy most of the benefit derived from thesale of the saris. Weavers get low profit margin as at their profit goes on to contribute towards their wages. Exporters have a higher level of margin compared with the other two.they also bear high risk which is involved in selling the products. Hence, the benefits are mostly enjoyed by the richer sections of the community. Government must give due consideration to this and a system must be developed for enabling weavers share equal benefit along with others. It is concluded that the weaver share in cost spread is 61 percent and profit spread 16 percent when sold in domestic market. Further, the weaver share in the cost spread is 24 percent and that of the profit spread just 3 percent when sold in export markets. It can be concluded that profit spread is minuscule when sold in foreign markets. More than three-fourth respondents are not in a position to avail of the bank loan due to the non-availability of collateral security with them. There should be focus on other kinds of interventions are necessary for the sustainability of grounded units.

Lastly all the major actors (Government, Women Associations, banks etc) have to play an important role in ensuring that women entrepreneurs have full knowledge of technology, legal and innovative skills to meet the needs and requirements of emerging new markets.In spite of abundant natural resources, socio-economic benefit of the sector like generation of employment for the large sections of tribals and marginalized rural men and women, growing export market as well as large domestic demand, a variety of problems have kept Indian sericulture away from achieving its true potential. These may include unhygienic conditions and diseases prevalent during silkworm rearing, mediocre quality of silkworm breeds and sub-optimal processing technology, lack of proper seed organization system and poor quality seed production, low technology adoption by the stakeholders, inadequate/poor extension efforts, age-old practices of post-cocoon operations, absence of quality certification and quality-linked pricing system and poor linkages among the four production sub-systems viz., seed, cocoon, yarn and fabric. In this context, some possible approaches have been suggested below to identify the economically viable businesses and entrepreneurs should be encouraged to take up those activities.

There is a need to focus on providing marketing linkages to cluster based activities. A strong marketing linkage will surely enhance the performance of business units, which in turn will improve the economic condition of the people of the locality.

4- Officials should tread cautiously while promoting activities like silk weaving at Dharmavaram. The market is full of competition and capacity of local weavers to match the quality and design of the products available in the market is limited. Only in case of assured market business units should be promoted on a large scale.Establishment of close linkage between forward and backward subsystems for greater efficiency and synergy as sericulture and silk industry is highly scattered and unorganized. There is a need to focus on pro-

viding marketing linkages to cluster based activities. A strong marketing linkage will surely enhance the performance of business units, which will in turn improve the economic conditions of the people of the locality. i- Skill up-gradation through structured and specially designed training programmes. There is also a need to develop a mechanism to keep the manufacturers updated with the latest technology such as designs and fashions in the readymade garments. This will increase the acceptability of their products in the market.Identification and promotion of potential clusters for silk production in potential traditional and non-traditional areas Capacity building for production and supply of adequate quality planting material, silkworm seed, reeling cocoons and silk yarn through promotion of large-scale production units with required techno-financial support.

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