

SERICULTURE – AN ENTREPRENEURIAL SPARK FOR INDIAN FARMER

Abstract

Small-scale farmers all over the world have shown a remarkable ability to adapt. They look for better ways to organize their farms. They strive new crops and cultivars, healthier animals, and different technologies to boost productivity, expand production, and lessen risk – and to raise profits. They have become more market leaning and have learned to take calculated risks to unwrap or create new markets for their goods. Many small-scale farmers have lot of the characteristics of an entrepreneur.

Sericulture is the rearing of silkworms for the production of silk. It dates back to around 4800 years ago in China. *Bombyx mori* is the most widely used species of silkworm and intensively studied. The life of the silk worm starts as the silk moth lays eggs. The eggs hatch, after that the larvae feed on mulberry leaves. While the silkworms are about 10,000 times heavier than when they hatched, they are set to spin a silk cocoon. The silk is formed in two glands in the silkworm's head and subsequently strained out in liquid form through openings called spinnerets.

Silk is Nature's souvenir to human being and a money-making fiber of animal derived other than wool. Being an environmental, recyclable and self-sustaining fabric; silk has assumed special importance in present age. Encouragement of sericulture can help in ecosystem progress as well as high economic returns.

Sericulture has become an important cottage industry in nation such as Brazil, China, France, India, Italy, Japan, Korea, and Russia. Nowadays, China and India are the two main producers, with more than 60% of the world's annual production.

Keywords: Farmer, Sericulture, Schemes, Central Government, State Government

Introduction

SERICULTURE, the technique of silk production, is an agro-industry, playing an prominent role in the rural economy of India. Silk-fibre is a protein generated by the silk-glands of silkworms.

In rising countries, e.g. India, agriculture and agro-based businesses play a essential role in the improvement of rural economy. Among the developing countries, India has the benefit of a very favorable position for doubling the present status of silk production of 2,969 tones outstanding to the low cost of labour.

Sericulture is preferably suited for developing the rural economy of the country, as it is practiced as a contributory industry to agriculture.

Recent research has also shown that sericulture can be developed as a highly gratifying agro-industry.

Agriculture Scenario in India

India is a land of villages. A majority of her population lives in villages. Most of them are farmers. Agriculture is their main occupation.

It is a good sign that the government is giving its maximum attention to the problem. Various activities of village uplift have been taken in hand.

FARMER suicides in the nation hike by over 40 per cent among 2014 and 2015. While 2014 saw 5,650 farmer suicides, the figure crossed 8,000 in 2015, according to government resource.

The farmer makes money by selling his crops. He remains pleased if the crops are good. But, if the crops fail, then his life becomes wretched.

A farmer suffers even if there is unusual increase in production consistently at all places. In such cases, the selling price of the crops goes down and the surplus crops get wasted.

The problem of small landholdings is majorly felt in states with high population density like Kerala, Bihar, Uttar Pradesh and eastern West Bengal. In these states, on an average, farmers have less than a hectare of cultivable land. The situation is unlike in states such as Rajasthan and Nagaland. In fact, in states similar to Punjab, Gujarat, Haryana, Karnataka, Maharashtra, and Madhya Pradesh the net spread area is more than the nationwide average.

The gap between small farmers, big farmers or landlords, and medium farmers is massive. India's inheritance laws with its prominence on fragmentation are problematic in nature. A lot of time and resources are wasted every time a fragmentation happens and it cuts down output since it is highly difficult to properly grow such small pieces of land. Marking boundaries also means that valuable and fertile land gets eaten up in the development. In such circumstances, there is precious little that the farmer can do is to improve the production.

Unsatisfactory realization of prices

One of the most important problems faced by Indian Farmer is regarding marketing. The laws in India are outdated and most frequently a farmer has no option but to trade his produce in regulated markets, where the middlemen are the ones making the maximum gains. At times, they can build up to 75% profits. If the middlemen can be removed then the farmers could have sold their products at improved rates.

On the other hand, the farmers have to be satisfied with the bare minimum gain. The situation is especially terrible in the sugar factories where the weighing scales are always said to be crooked and it takes a significant time for the farmers to just break even. In some circumstances the farmers also need to give away their produce for free to the moneylenders. Distress selling in small villages is a usually common phenomenon as well. The Rural Credit investigation has correctly stated that nothing is favorable for the farmers in terms of time, place or conditions of trade.

Farmer searching entrepreneur in the mirror:

Farmer-entrepreneurs see their land as a business. They see their farms as a means of bring in profits. They are obsessive about their farm business and are keen to take calculated risks to make their farms lucrative and their business will developed.

Following are the reasons for farming:

The figure resembles as ladder which is indicating the intensions to do farming in progressive way.



There are two components to entrepreneurship. The first is the managerial skills required to set up and execute a profitable farm business. The second is 'entrepreneurial spirit'. Both are important. Managerial abilities can be educated, but an entrepreneurial fortitude cannot be taught. Many farmers are by now brilliant managers and many also have some of the strength of an entrepreneur. As 'price takers' many farmers have developed stupendous abilities to make the most of their resources. But being 'price takers' advises that these farmers are not pioneer, do not take risks, and lack the drive that is generally connected with an entrepreneurial spirit.

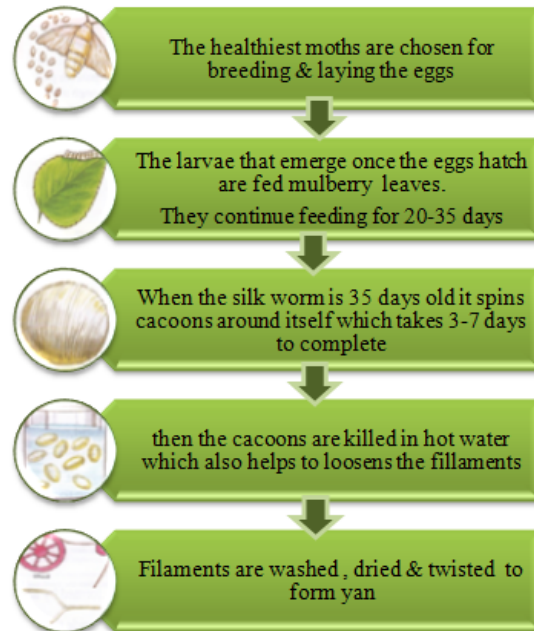
Sericulture in India

India is the second largest manufacturer of silk in the world with an yearly silk production of around 16,500 M.Tons. All the well-known varieties of silk, viz. Mulberry, Eri, Muga and Tasar are manufactured in India. Mulberry silk is popular variety in India, contributing more than 87% of the Country's silk production.

The present global scenario clearly indicates the enormous opportunities for the Indian Silk Industry.

India is the only country in the world which produces all the four types of silk namely Mulberry, Eri, Tasar and Muga. Mulberry is the largest proficient sericulture industry in India. Mulberry silk production contributes nearby 75 percent for entire silk production in the country. India is second highest silk producer of raw silk and consumer of pure of silk. In India, silk production has improved in recent years. Sericulture provides livelihood to large segment of the rural and semi- urban populace i.e. for the people busy in pre-cocoon to post- cocoon sectors of sericulture industry. In recent years the Sericulture is picked by many farmers as a cash crop in the agriculture sector and it is a boon to the farmers to transform their socio economic status.

Process:



There are majorly two types of silk:

1. **Mulberry silk** is produced extensively in the states of Karnataka, West Bengal and Jammu and Kashmir. About 85 per cent of the country's production is from Karnataka state by rearing multivoltine hybrids of silkworm and this activity facilitates the sericulturist to reap five to six crops a year. The cost of producing mulberry has a straight impact on the cost of manufacturing cocoons, as about 60% of the total cost of production of cocoons goes to the production of mulberry leaves. Experiments carried out in the moriculture divisions of the research institutions to develop new varieties of mulberry & enhanced methods of cultivation have shown that over 30,000 kg of quality leaf can be produced per annum at competitive costs against 15,000 kg by taking up the traditional methods under irrigation. Many high-yielding varieties have been brought into the country, & they not only double the leaf yield, but also keep the succulence of the leaves, a factor which is very important under tropical conditions.
2. **Tasar Silk farming** is happened in Gadchiroli, Chandrapur, Bhandara and Gondia Districts of Maharashtra from around 250 Years. Around 3000 Tribal Families are engaged in doing Tasar Silk farming in this region and producing Tasar silk cocoons. The essential plants for Tasar are Aen, Arjun, Kinjal, Jambhul are available in large scale in the other districts of Maharashtra like Dhulia, Nasik, Nandurbar, Amravati, Yavatmal, Nanded, Thane, Ratnagiri and Sindhudurg etc.

One can nurture tasar silk worm on the trees like Aen and arjun in the Forest and produce Silk Cocoons. Tasar is copper colour, rough silk mainly used for furnishings and interiors. It is less glossy than mulberry silk, but has its own texture and appeal. Tasar silk is produced by the silkworm, *Antheraea mylitta*

which mostly thrive on the food plants Aen and Arjun. The rearings are carried out in nature on the trees in the open. In India, tasar silk is mainly manufactured in the states of Jharkhand, Chattisgarh and Orissa, besides Maharashtra, West Bengal and Andhra Pradesh. Tasar culture is the key stay for many a clannish community in India.

Farmers want access to finance, land, labour, information and knowledge:

Schemes by the Indian Government for Promotion of Sericulture in India:

Following are the two schemes designed on the basis of contribution of State and Central Govt Finance.

1. **Project Mode (Prakalpa Yojana):** This sceme is executed in the Pune District. Also in Yevala, Dist. Nasik scheme is executed for the Vivar (Warter Sump) Project. State Governments contribution in this project is given to Central Silk Board.
2. **2. Group Development Scheme (Samuha Vikas Yojana):** This Scheme is executed in the Beed, Usmanabad and Buldhana Districts of Maharashtra in the year 2009-2010.

Schemes by the State Government for Promotion of Sericulture in Maharashtra:

District Annual Scheme (Jilha Varshik Yojana):

Division of Sericulture every year estimates the Tuti plantation in rural area and on the basis of that choose the farmers group who can go into sericulture based farming. Tuti plant seeds and additional necessary activities like educational tour, Silk work eggs are provided to these new farmers through the Jilha Varshik Yojana from State Government Scheme.

Assuared Wages Scheme (Rojgar Hami Yojana):

With reference to the regime GR Year 2008-2009, Dated 12 January 2009, Rs. 20,000/- Grant is approved. In this Amount of Rs. 12,000/- is approved for labour charges and Rs. 8000/- for equipment purchase is approved which can be given to farmers during the phase of 3 years.

Sericulture Requirements & Schemes Available:

Particulars	Minimum Requirements	Schemes from State Government (Sharing of unit cost)(₹)	Schemes from central Government (Sharing of unit cost)(₹)
Climate	temperature range of 20-300Cwith sunshine of 9 to 13 hours per day	-	-
Soil	Soils with a pH range of 6.5 to 7.5 are ideal fertile, deep, friable, sandy loam	-	-
Water/Irrigation (50000 unit cost)	50 to 60 mm of water once in a week.	12500	25000
Land preparation	<ul style="list-style-type: none"> •flat lands are suitable. •Ploughing upto a depth of 30-45 cm to loosen the soil •Recommendation-Basal dose of farm yard manure @20 tons per hectare 	-	-

Particulars		Minimum Requirements	Schemes from State Government (Sharing of unit cost)(₹)	Schemes from central Government (Sharing of unit cost)(₹)
Planting material		<ul style="list-style-type: none"> •Cuttings of 15-20 cm length with 3-4 healthy buds are selected for plantation •Saplings of about 80-90 days old can be used for planting 	-	-
Spacing		90cm x90cm minimum spacing requirement to grow 12345 plants	-	-
Planting		District 22 will spend a total of 110 million from the district annual plan to build 110 million mulberry plants	-	-
		For bid, Pune, Usmanabaad & Buldhana district, there is central & state government plan, where they have granted Rs. 40000/- for insect rearing material requirement which is the Ratio of 75% from central & state government Participation & 25 % Farmer participation	-	-
Manures and fertilizers		Farm Yard Manure to be applied at 20t/ha/year in two doses following the first bottom pruning & third pruning. Micro nutrients have to be applied wherever necessary	-	
Rearing				
Construction of Rearing House (of unit cost 150000)	Proper material for wall & roof fabrication, orientation of building, using right design	Shelf Rearing- A floor area of 150 sft can provide rearing space for 100 Cross Bred or Bivoltine Disease Free Layings	37500	37500
		Platform Rearing- Ideal size of each platform will be 5 x 25 ft. A building floor area of 250-300sft is required to rear 100 Disease Free Layings of Cross Bred or 75 Bivoltine Disease Free Layings		
Maintenance of Rearing House (of Unit Cost 345000)	Maintenance of chawkie garden & procurement of rearing centre & chawkie rearing equipments		86250	86250

Bank Loan for sericulture:

Bank loan of 85-95% of the total cost of development shall be available from the financing institution.

Loan is given on the basis of following Models:

Parameter	Model I	Model II
System	Tray Rearing	Shoot Rearing
Garden Area	1 Acre	2 Acre
Project Cost	₹ 119900	₹ 402500
Margin Money	₹ 12000	₹ 40300
Loan Availability	₹ 107900	₹ 362200
NPV	₹ 189946	₹ 866044
IRR (%)	>50	>50

Sericulture and silk production have a huge potential in our country specified it is made available to rural people, especially women, and its marketing is organized in parallel. It can serve as an outstanding mode for employment generation and expansion of income. This requires not only providing fresh technological keys to primary producers but more prominently, evolving and setting up new systems of organizing production and marketing. The technology of sericulture and silk production is well-known.

Conclusion

Above all is the required to respect the sovereignty of the farmer-entrepreneurs, mainly their approach to decision-making. Agencies hoping to foster entrepreneurial culture must be prepared to decentralize their own decision-making so that the farmer-entrepreneur is not trapped by well-intentioned but constraining bureaucratic, centralized decision-making.

In short, support agencies should also behave like entrepreneurs. Creating this shared tradition must be harmonized by a freer economy. Economic and financial procedures that support state control of marketing will support efforts to encourage entrepreneurial behaviour.

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Web-links

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