

**Scope of Income and Employment Generation Through
Entrepreneurship in Silkworm Rearing in Uttarakhand
(A Study of Rural Households in Vikasnagar Block of
Dehradun, Uttarakhand)**

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Abstract

At present creating employment opportunities has become a big challenge for all the state governments. The state of Uttarakhand is also trying to find new employment opportunities. As everyone cannot get a government, semi-government or private job, so it is necessary to motivate the unemployed to engage in self-employment activities or entrepreneurship. In this regard, a traditional employment opportunity is available in the sericulture cottage industry which is a combination of agriculture and industry.

Uttarakhand is known as the "Bowl of Bivoltine silk in India, which is high quality internationally graded cocoon. This state is the only state in India that produces all four types of the cocoon (Mulberry, Oak Taser, Muga and Agriculture). So, there is a great opportunity for the rural people of the state to adopt entrepreneurship in sericulture to generate more income for their livelihood. An attempt has been made in this study to analyze employment and income generation through entrepreneurship in silkworm rearing in rural areas of Vikasnagar block of district Dehradun.

Keywords

Entrepreneurship, Agro-industry, Income generation, Silkworm.

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Introduction

The word 'Sericulture' is derived from the Greek word, Sericos, meaning, silk, and the English word, Culture, meaning, rearing." Sericulture refers to the conscious mass-scale rearing of silk-producing organisms to obtain silk" (Vijayakumar et al., 2007). Sericulture is a scientific method of conservation and rearing of silkworms for the production of silk and other by-product. It is an agro-based labour-intensive industry that does not involve the utilization of very sophisticated machinery.

"Silk is a protein fiber produced by the silkworm for spinning a cocoon. Silk is the perennial queen of textiles. As a natural fiber, it is very light, elegant, smooth and with beautiful luster" (Narasaiah, 1992). India occupies the second position in the world production of raw silk producing 17.5% of total silk.

In Uttarakhand, sericulture plays a dominant role in shaping the economic destiny of the rural people. Uttarakhand is the only state producing all four kinds of cocoons via. Mulberry, Oak Tassar, Muga and Sericulture.

Literature View

Among cottage and village industries, sericulture is the largest employer after handlooms (Hanumappa, 1986; Venkatanarasaiah, 1992). Out of the 5,76,000 villages of India in which sericulture provides employment to about 6 million persons, most of them belong to the weaker sections of the society (Indian Silk, 1987). Chelladundi (1999) discussed the role of sericulture in generating income and employment in a very clear-cut manner. The small-scale mulberry farms provide ample scope for employment of own family labor and suggests that it bears potential to solve the problem of seasonal unemployment (Jayaram, C. et al., 1998).

Besides, the then-farm activity alone creates 4.18 man-days of employment (Vijay Kumar, et al, 2007). (Sekharappa, 1989), calculates that one hectare of irrigated land generates 13 work years annually in mulberry cultivation, silkworm rearing, silk reeling, twisting and weaving, while Usha Rani (2007) argues that the whole sericulture activity including plantation and rearing can generate 481.79 man-days in a year. The involvement of family labor under both types of irrigated and other mulberry cultivation is about 46% (Lakshmi et al., 1999). In the Rayalaseema district of Andhra Pradesh, the use of family labor in mulberry cultivation and silkworm rearing accounts for 68% (Narayanan, 1979). Thus, sericulture activity has a very significant effect on the employment and income generation.

Objectives of The Study

The main objectives of this study are-

1. To assess the employment and income generation potential through silkworm rearing in Uttarakhand
2. To assess amount of Cocoon produced respondents
3. To analyze revenue generated by silkworm rearing and family expenses.
4. To analyze the impact of silkworm rearing on living standard of silkworm rearers.
5. To assess the satisfaction level of the respondents with Silkworm rearing activities.

Research Methodology

This study is an attempt to assess the Employment and income generation through Sericulture in Vikasnagar block of District Dehradun. The present study is based on both Primary and secondary data. In the first phase of the study, the Secondary data was collected. The secondary data was supplemented by various research works encountered during the study, related books and journals. Primary data was collected from the randomly selected villages of Vikasnagar block of district Dehradun. The questionnaire was framed on the basis of a transaction walk of and discussion with the silkworm rearer. For this study total of 70 respondents were interviewed.

a. Area of Study

The study has been carried out in Vikasnagar block of District Dehradun. The Vikasnagar block was selected based on the potentiality and production of Taser/ of mulberry cocoons, where both types of Sericulture-mulberry and Taser are being practiced.

b. Sample Size

For the study, 10 villages of Vikasnagar block were selected randomly. Out of these 10 selected villages, 8 respondents were selected for the survey. Thus, data were collected from a total of 80 respondents. For conducting the survey to gather primary data, villages namely Kaarbari Grant, Bharpur, Chandpur, Singhniwala, Sherpur, Sabhawala, Tiperpur and Shankarpur of Vikasnagar block were selected randomly.

c. Statistical tools

Primary data has been analyzed by using the Percentage distribution method.

Limitations of The Study

This study is entirely based on the opinion of the respondents who are uneducated rural people. They do not maintain any books of account. Further shortage of time at disposal, limited resources, and unwillingness on the part of most of the respondents for to spend more time for interview also limited the scope of the study.

Data Analysis and Interpretation

To analyze the Income and Employment Generation through Entrepreneurship in Silkworm Rearing in Uttarakhand, a study of rural households those who are engaged in silkworm rearing in Vikasnagar block of Dehradun is conducted. The analysis of the primary data of this study is as follows:

(i) Age-wised is tribution of the Respondents

As shown in the table 1.1 given below that the majority of the silkworm-rearing respondents (36%) were in the age group more than 45 years followed by 34% in the age group 35-45 and 30% in the age group 25-35 years.

Table 1.1: Age-wised is tribution of the respondents

S. N.	The age group of Respondents	No. of Respondents	Percentage (%)
1	<25 years	NIL	00
2	25-35 years	24	30
3	35-45 years	27	34
4	> 45 years	29	36
	Total	80	100

*Source:PrimaryData

(i) Village-wisedistributionofrespondents

From the table 1.2 as shown below it is clear that 30% respondents were of Singhniwala village, 20% of respondents were of Sherpur village, 38% of the respondents were from Sabhawala village and 12% of the respondents were of Tiperpur village.

Table 1.2: Village-wised is tribution of respondents

S. N.	Sample Village Name	No. of respondents	Percentage (%)
1	Kaarbari Grant	10	12.5
2	Sherpur	10	12.5
3	Sabhawala	10	12.5
4	Tiperpur	10	12.5
5	Bharatpur	10	12.5
6	Singhniwala	10	12.5
7	Chandpur	10	12.5
8	Shankarpur	10	12.5
	Total	80	100

*Source:PrimaryData

(i) Gender-wised is tribution of the respondents

Gender-wise classification of the respondent is shown in the table no. 1.3. This shows the total number of male workers in the study population comprised 30 (37.5%) and the total female workers were 50 (62.5%).

Table 1.3: Gender-wise is tribution of the respondents

S. N.	Gender wise distribution	No. of Respondents	Percentage (%)
1	Males	30	37.5
2	Females	50	62.5
	Total	80	100

*Source:PrimaryData

(iv) Category-wisedistributionofrespondents

In this study 12% of the respondents belonged to APL (Above Poverty Line) category while the maximum i.e. 88% of the respondents belonged to BPL(below poverty line)category.

(v) Classification on the basis of the type of the house

The type of the house of respondents is shown in the table 1.4 given below. It is clear that 2% of the respondents lived in Kutcha House. A considerable 16% oftherespondentslivedinSemi-Kutcha House while the maximum i.e. 82% of the respondents lived in Pucca House.

Table 1.4: House Typewise Classification of respondents

S. N.	Sample Village Name	No. of respondents	Percentage (%)
1	Kutcha-house	12	15
2	Semi-Kutcha house	25	31
3	Pucca House	43	54
4	Other	00	00
	Total	80	100

*Source:PrimaryData

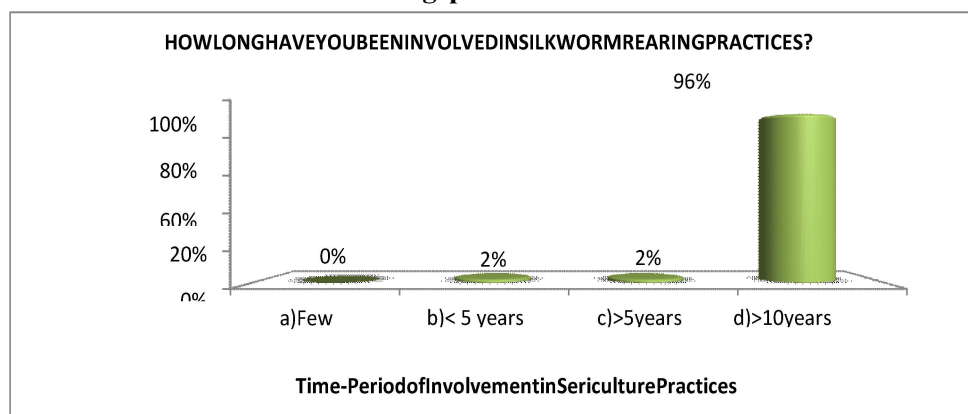
(vi) Education level wised is tribution of respondents

From the table and figure as shown below it is clear that 80% respondents were illiterate, 16% respondents passed Primary school, 2% of respondents passed Middle School and only 2% of the respondents passed High School.

(vii) Duration of involvement in silkworm-rearing practices of the respondents

As shown in the figure 1.1 given below, 2%respondents have been practicing silkworm rearing for less than five years, 2% of respondents have been practicing silkworm rearing for more than five years and the maximum i.e. 96% of respondents have been practicing silkworm rearing since morethantenyyears.

Figure: 1.1 Percentage distributions of respondents according to involvement in silk worm rearing practices



(viii) Financial source to start silk worm rearing activity

From table 1.6 is clear that 54% of the respondent’s financial source to start silk worm rearing activity was subsidies from Government and the considerable i.e. 46% of the respondents started silk worm rearing activity with their personal money.

Table 1.6: Financial Source to Start Silk worm rearing Activity

S. N.	Financial Sources	No. of Respondents	Percentage (%)
1	Loan	12	15
2	Subsidies from Government	44	55
3	Personal	24	30
	Total	80	100

*Source: Primary Data

(ix) Availability of the raw material to respondents

Availability of raw materials to the respondents was easy for 42% of respondents. Availability of raw material was alright for 32% of respondents and 26% of the respondents found it difficult.

(x) Days/ Months in a year that the respondents remain engaged in rearing Silk worm

Each respondent take 2 crop of Silk worm every year one in between the month of March to May and another in between the month of July to October. Each respondent receives employment for 70-90 days.

(xi) Number of trays of respondents

It is revealed from the primary data that a maximum of 64% of the respondents

have less than 30 trays and 30% of respondents have trays ranging between 30-50 trays while only 6% of respondents have trays ranging between 50-70 trays.

(xii) Annual amount of production of Cocoon by respondents

Table 1.7 given below shows the total production of cocoons produced by the respondents in sample villages. It shows that a maximum of 78 % of respondents produced less than 25 kg of cocoons while 18% produced between 25 to 40 kg of cocoons per year. Only 4% of respondents produced between 40 to 55 kg cocoons. None of the respondents produced more than 55 kg cocoon in sample villages.

Table 1.7: Amount of Cocoon production by respondents

S. N.	Financial Sources	Percentage (%)
1	Less than 25 kg	78
2	25-40 kg	18
3	40-55 kg	04
4	More than 55 kg	Nil
	Total	100

*Source: Primary Data

(xiii) Annual total cost of Cocoon production (in.)

Table 1.8 given below shows that 90% of the respondents have the annual cost of Cocoon production less than Rs. 5,000 and 10% of the respondents have an annual cost of Cocoon Production ranging between Rs. 5-20,000.

Table 1.8: Annual Cost of Cocoon Production (in Rs)

S. N.	Production cost (annual in Rs.)	Percentage (%)
1	Less than 5,000	90
2	5,000 to 20,000	10
3	20,000 to 35,000	00
4	More than 35,000	00
	Total	100

*Source: Primary Data

(xiv) Sale (revenue) generated from silkworm rearing

The revenue received by the respondents is shown in table 1.9. It is clear that 54% of respondents generated less than Rs. 10,000 from Silkworm rearing, 46% respondents generated revenue ranging between Rs. 10-30,000.

Table 1.9: Total Sales or Revenue generated by respondents (in Rs.)

S. N.	Total Revenue (annual in Rs.)	Percentage (%)
1	Less than 10,000	46
2	10,000 to 30,000	54
3	30,000 to 50,000	00
4	More than 50,000	00
	Total	100

*Source:PrimaryData

(xv) Does income from silkworm rearing meet the family expenses?

Table 1.10 shows that 28% of the respondents saved a little, 46% respondents saved just enough. For 22% of respondents, it wasn't enough and for 2% respondents found income from rearing silkworm to be far from enough.

Table:1.10 Income from silkworm rearing meets the family expenses

Coverage of Family Expenses from silkworm rearing Income	No. of respondents	Percent (%)
a) Yes, a lot saved	0	0
b) Yes, a little saved	24	28
c) Yes, just enough	33	46
d) Not enough	21	22
e) Far from enough	2	4
Total	80	100

*Source:PrimaryData

(xvi) Change in Standard of living after silkworm rearing

Table 1.11 shows the change in the standard of living of respondents after being involved in silkworm rearing. 44% of respondents said it is fairly improved after involving in silkworm rearing while no change was felt in standard of living by 56% of the respondents after involvement in silkworm rearing.

Table 1.11: Change in the Standard of Living of respondents after involving in silkworm rearing

Change in Living Standards of respondents	No. of respondents	Percent (%)
a) Highly Improved	0	0
b) Fairly Improved	22	44
c) No Change	28	56
d) Worsened	0	0
Total	50	100

*Source:PrimaryData

(xvii) Satisfaction level among silkworm rears activity

From the table 1.12 given below it is clear that 14% of the respondents were less satisfied, 44% were moderately satisfied, 4% respondents were certainly satisfied and 38% respondents were not satisfied with the silkworm rearing activity.

Table 1.12: Satisfaction level of the respondents with Silkworm rearing activity

Satisfaction level	No. of respondents	Percent (%)
a) Less satisfied	07	14
b) Moderately satisfied	22	44
c) Highly satisfied	02	04
d) Dissatisfied	19	38
Total	50	100

*Source: Primary Data

Conclusion

- In the study area both men and women participate in Silkworm rearing activity, but proportion of women participation in Sericulture practices in the study area was greater than that of men. Training programs are organized by the Government from time to time in order to guide the readers about the proper method of rearing. Raw materials for rearing silkworms including Silkworm larvae, mulberry leaves, trays (small and large), etc. are all provided by the Government.
- To encourage Silkworm rearing activity, Government provides various subsidies including Rs. 45,000 and more to silkworm rearers for building silkworm-rearing houses. The large number of respondents in the study area has benefitted from the subsidies provided by the Government.
- Respondents indulge in Silkworm rearing activity twice a year and in turn receive employment for 60-70 days. Silkworm rearers incur losses due to diseases and the negative impact of natural factors.
- There is insufficient financial support for silkworm rearers. Silkworm rearers face difficulties due to the differentiated price of their product in the market because of few buyers of the silk. Silkworm rearers are technologically backward they still use the traditional method of silkworm rearing. The problem of shortage of Mulberry leaves is also emerging to the silkworm rearers due to that they have to spend more money on buying raw materials which raises the cost of silkworm rears.
- The two types of silkworm reared are Taser and mulberry. Respondents in study are as all their produce in the Government silk market located in Selaqui.

Silkworm rearing serves as an additional income generating source in study area. It is suited to the respondents' lifestyles.

- Silkworm rearing not only serves as a tool for employment and income generation but it also helps in improving the quality of life of people.
- It can be concluded that Silkworm rearing enables rural people financially strong and helps in women empowerment by providing them the means of employment irrespective of their level of education.

Suggestions

- The Government should give compensation to the silkworm rearers for the losses incurred in this occupation due to diseases and the negative impact of natural factors.
- There should be enough financial facilities for the improvement of their occupation which is still more beneficial.
- The merchants should stop being biased while buying the produce from silkworm rearer.
- Fair prices of silk should be given to the silkworm rearers.
- Compensation should be given in case of injuries while plucking mulberry leaves from a tree.
- Establishment of linkages among four identified production sub-systems viz., seed, cocoon, yarn and fabric.
- Government should focus on strengthening the sericulture resources of the silkworm rearers by way of encouraging the subsidies on rearing houses, and equipment and moreover, by imparting sericulture practices knowledge among the rearers.
- Training programs should be organized for the rearers from time to time regarding the use of new technology in this field.
- Government should encourage the plantation of mulberry trees which will help to reduce the cost of production.

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