CHAPTER-I
INTRODUCTION

1.1. Background of the study:

Natural fibre is one of the most important raw materials in the field of textiles. Silk, cotton and wool are major natural fibres produced in the world. As a kind of natural fibre, cotton is regarded as the “king of textile fibre” among the three natural fibres. It is one of the significant agricultural crops which provides lion share of textile fibre for industrial use, for production of clothing, home furnishing, etc. Products of cotton are not only comfortable to wear, but also quite durable. It is also resistant to abrasion and at the same time cotton is washable as well as relatively inexpensive. Improvement on textile technology has made cotton finished products crease resistant, shrink and stain resistant.

Similarly, wool was in use before the use of cotton. Around 1, 75,000 years ago in the Stone Age, man hunted the sheep for both food and clothing. Gradually the human civilization developed the skill of the use of wool to meet different needs. During the 20th century, production of wool has increased. In present day, like cotton, wool also is a useful textile fibre.

But among all the three natural textile fibres, silk is the most precious and beautiful textile fibre and is regarded as the ‘Queen of Textile’. India occupies the second position in the world production of raw silk producing 17.5% of total silk. Silk signifies luxury and class. Even today, no other fabric can match it in luster and
elegance. "Silk is a protein fibre produced by the silkworm for spinning a cocoon. It is so fine that a kilometre long thread would weigh only a quarter of a gram. It has good dyeability, durability and draping qualities. Silk is the perennial queen of textiles. As a natural fibre, it is very light, elegant, smooth and with beautiful lustre" (Narasaiah, 1992). Silk may be defined as 'Yarn reeled' from the cocoon spun by the caterpillars of silk producing insects (Silk-xvi, 1962).

1.2. Conceptual framework:

"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 silk worms for the production of silk and other by-product. It is an agro-based labour intensive industry that does not involve utilization of very sophisticated machinery. Sericulture is an income generating activity for the rural people of hills (Mattu et al, 2000).

Sericulture is an agro-based cottage industry that provides both type of employment-skilled and unskilled labour (Lakshmanan & Jayram, 1998) which involves rising of food plants, production of silkworms eggs, rearing of silkworm by feeding them the leaves of the food plants to obtain cocoons and extraction of yarn from the cocoon by reeling or spinning.
Besides the traditional features of sericulture, i.e. it requires low investment, gives high returns, has low gestation period, practiced by people with less education, requires low technology, it has certain additional benefits such as it gives continuous regular income to the rural people irrespective of caste, creed, religion or gender (Kasi, 2013). The most important feature of this sector is egalitarianism i.e. both rich and poor farmers get some income from this sector. Women has a dominant role in sericulture- it is the only sector which gives equal opportunities to the women in social, political, economic and other spheres of life (Geetha & Indira, 2011; Goyal, 2007; Pillai & Shanta, 2011; Thomas, Muradian, de Groot, & de Ruijter, 2010; Vasanthi, 1992; Vijayanthi, 2002).

The silk industry is spread out in almost all parts of India because many people adopt sericulture as their livelihood due to the above advantages (Balasubramanian, 1986). In India, sericulture can be found in different regions for example, temperate (Kashmir), subtropical (Jammu, Himachal Pradesh, Uttar Pradesh, N. E. Region) and tropical (West Bengal, Bihar, Orissa, Madhya Pradesh, Andhra Pradesh, Tamil Nadu and Karnataka). Among them Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal are famous for mulberry silk and Assam and all the other states of North East (NE) are famous for non-mulberry silk.

According to the Annual Report of Central Silk Board (CSB), 2011, India recorded a production of 23060 MT of raw silk. A total of 957948 sericulture families from 55255 sericulture villages contributed to the production of raw silk. It provides
employment to 75.60 lakh persons and Foreign exchange earnings was Rs. 2353.33 crore in 2011-12.

In Assam also, sericulture plays a predominant role in shaping the economic destiny of the rural people. As an agro-based cottage industry sericulture fits very well in Assam’s rural structure, where agriculture continues to be the main occupation. In Assam, sericulture is not simply an industry or an occupation but it is an integral part of the socio cultural life of the rural Assamese people. It is a prime socio economic activity in Assam since more than 600 years ago. The state of Assam is the birth place of Muga and Eri (Devi, 1999). NE region including Assam is regarded as non- mulberry ‘Seri Hub’ because of rich biodiversity of sericigenus fauna of commercial importance (Deuri et al, 2013). It produces almost 100% of Muga, 99% of Eri, and 100% of Oak Tassar in the country (Deori et al, 2013).

Assam is basically famous for two types of silk viz., Muga and Eri. Muga is the exclusive product of Assam. Production of Muga is concentrated in Assam in the districts of Tinsukia, Dibrugarh, Sivasagar, Jorhat, Golaghat, Lakhimpur, Dhemaji, Kokrajhar, Udalguri, Goalpara and Kamrup. Eri is concentrated in almost all parts of Assam especially in the districts of Dhubri, Kokrajhar, N.C. Hills, Karbi-Anglong, Cachar, Darrang, Nagaon, Marigaon, Dhemaji, Lakhimpur, Jorhat, Sivasagar, Dibrugarh, Tinsukia, Golaghat, Udalguri, Goalpara and Kamrup. Mulberry and Tassar Silk is produced in a small quantity in Assam. Mulberry is concentrated in the districts of Jorhat, Golaghat, Sivasagar and Darrang of Assam.
Oak Tasar has been recently started in Assam and is produced in N.C. Hills and Karbi-Anglong districts.

Sualkuchi is the main weaving hub of Assam. It consists of 5000 families and about 15000 wage weavers and hundreds of trader (Nath, accessed, 2012). Weaving in Assam is so beautiful that Gandhi once praised the Assamese women during his visit in Assam and remarked “Assamese women weave fairy tales in their clothes.” (Encyclopedia of Assam, 2009)

The importance of sericulture sector in Assam can be reflected from the fact that it ranks 3rd position in the raw silk production in the country. According to the Economic Survey, Assam, 2013-14, 291592 sericulture families from 10746 sericulture villages produces 1934 MT, 109 MT and 25 MT of Eri, Muga and Mulberry raw silk respectively.

1.3: Types of sericulture:

There are generally two types of silk—mulberry and non-mulberry. Again, we find three varieties of non-mulberry silk, viz., Eri, Muga and Tassar.
Each of these types of silk is produced by a distinct variety of silkworm feeding on a specific host plant. Following table shows the various types of silk and its respective host plants.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Types of silk</th>
<th>Name of silkworm</th>
<th>Main host plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mulberry silk</td>
<td>Mulberry silk worms</td>
<td>Mulberry</td>
</tr>
<tr>
<td>2</td>
<td>Tassar silk</td>
<td>Oak Tassar silk worm</td>
<td>Asan, Arjun</td>
</tr>
<tr>
<td>3</td>
<td>Muga silk</td>
<td>Muga silk worm</td>
<td>Som, Soalu</td>
</tr>
<tr>
<td>4</td>
<td>Eri silk</td>
<td>Eri silk worm</td>
<td>Caster, Kaesseru</td>
</tr>
</tbody>
</table>

All these four kinds of silk have commercial importance all over the world. India has the unique position in the world as it produces all the four varieties of silk, i.e. Eri, Muga, Tassar and Mulberry. Mulberry silk is commonly known as silk and it is more economic. It occupies almost all of the world’s silk production. The silkworms of this type are fed on mulberry leaves. It is also called ‘Moriculture’. It dominates the field of Sericulture in various aspects like quality, quantity and popularity.

On the other hand, non mulberry silk are – Eri, Muga, and Tassar which are also called wild silk because the silkworms producing these silk are not fully domesticated as mulberry worms and cultivation of host plants and silkworm rearing are done in forest and hilly areas, mostly by tribals. Commonly eighty insects are known to produce wild silks of more or less commercial value.
In India, mulberry sericulture is mainly practiced in southern States of India i.e.
Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal and Jammu & Kashmir.
Tasar is mainly produced in Bihar, Orissa, Madhya Pradesh, Andhra Pradesh and
West Bengal. Production of Muga is confined to Assam and neighbouring states.
Eri is largely practiced in all the north eastern states, Bihar and Orissa. As already
mentioned, north east region is the non mulberry hub, among that, Assam got
Geographical Identification Mark in the production of Muga. Again, within all
districts of north east region, Goalpara of Assam and East Garo Hills of Meghalaya
got the Geographical Identification Mark in the production of quality Muga seed
 cocoons.

1.4. Major Activities of Sericulture:

Silk culture or sericulture is known as the care of the little insect which produces
the silk thread. During the entire cycle of the silk moth, from egg to cocoon, it
requires attention and patience (Scalamandre, 1983). There are four major
activities of sericulture, which include (1) food plant cultivation, (2) silk worm
rearing (3) silkworm reeling, (4) weaving, printing and dyeing work. Each activity
needs different skills and the nature of work varies. Out of these four activities,
first two are land based activities and are mainly associated with agrarian families
and later two are indoor works. These works are usually carried out by skilled rural
landless people. It is generally seen that people with land are mostly involved in
agriculture. So these activities of sericulture provide employment opportunities to
the landless people. Hence it provides ample scope for both on farm and non-farm activities.

Sericulture practice starts with the cultivation of food plants for rearing the silkworms. For the production of Muga cocoon, rearer is required to rear Som or Soalu plants. If rearer wants to produce mulberry then he or she is required to raise mulberry plants. Similarly Tassar and Eri rearer have to raise Arjuna, Sal and Kesseru, Castor trees respectively.

The second stage is rearing of silkworms. When the host plants are ready with sufficient foliage, the newly hatched silkworms are released to feed on such leaves. In case of Muga and Tassar, silkworms are reared outdoor on trees itself. On the other hand, Eri and Mulberry rearing is indoor activity. Silkworms feed voraciously and their body weight increases very fast. They pass through four distinct stages in their life cycle. They are egg, larva, pupae and moth. The moth lays eggs. From the eggs, tiny ant like worms hatch out and feed on leaves. This is called larva which is the second stage. In the third stage when the larva is fully grown, it spins silk in to a cocoon around itself. Inside the cocoon, the worms transforms into pupae. After some days, the pupae develop into a moth which is the final stage. This moth comes out of the cocoon. After copulation the female moth lays eggs. The life cycle differs from region to region and from species to species depending on factors like climate, vegetation, sunlight and the like (Kovalev 1970).
After the formation of cocoons, they are boiled and silk filament is unwinded on reeling devices for commercial extraction of silk yarn. This is the third stage in the practice of sericulture. Thereafter silk yarn is used to weave the fabric, which is dyed and printed for value addition of the product, which is the last stage of sericulture.

Different activities undertaken in the different types of silk are shown below

<table>
<thead>
<tr>
<th>Silkworm Variety</th>
<th>Rearing</th>
<th>Cocoon Formation</th>
<th>Egg Production</th>
<th>Reeling/Spinning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulberry</td>
<td>Indoor</td>
<td>Indoor</td>
<td>Indoor</td>
<td>Indoor</td>
</tr>
<tr>
<td>Eri</td>
<td>Indoor</td>
<td>Indoor</td>
<td>Indoor</td>
<td>Indoor</td>
</tr>
<tr>
<td>Tussar</td>
<td>Outdoor</td>
<td>Outdoor</td>
<td>Indoor</td>
<td>Indoor</td>
</tr>
<tr>
<td>Muga</td>
<td>Outdoor</td>
<td>Indoor</td>
<td>Indoor</td>
<td>Indoor</td>
</tr>
</tbody>
</table>

In each of the above mentioned activities, a large number of people, basically, uneducated, rural poor women are engaged. Thus sericulture is regarded as an economically viable industry capable of reducing rural poverty by employing uneducated people—both male and female in rural areas.

1.5. Rationale of the study:

Sericulture being an agro-based cottage industry has a significant impact on the rural economy of Assam. As we know, Assam is a developing state and its rural economy is entirely based on agriculture. But agriculture has certain specific problem such as small land holding, insufficient capital and investment incentives, inadequate farm infrastructure, limited market and stagnant prices of
agricultural products etc. It is therefore necessary to focus on a broader spectrum of the rural economy. The establishment of rural based industries like sericulture in particular can be very effective in creating new job opportunities and providing supplementary income. It eminently qualifies as a remunerative crop for all types of farmers from a small/marginal farmer with meager resources to a large farmer. Sericulture activity has a short gestation period and the returns are quick. Again, different studies show that sericulture provides regular and continuous income over the year by generating more employment in comparison to the other crops in India. For example, according to Lakshman et al. (2007), sericulture generates highest man days of employment throughout the year, among three annual crops (sericulture, turmeric, sugarcane), followed by sugarcane, paddy, maize and vegetable as shown in Table 1.3

<table>
<thead>
<tr>
<th>Crop</th>
<th>Male Employment (Man Days)</th>
<th>Female Employment (Man Days)</th>
<th>Total Employment (Man Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sericulture</td>
<td>186.2</td>
<td>345.8</td>
<td>532</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>153.4</td>
<td>142.75</td>
<td>296.15</td>
</tr>
<tr>
<td>Turmeric</td>
<td>53.5</td>
<td>80</td>
<td>133.5</td>
</tr>
<tr>
<td>Paddy + Vegetables</td>
<td>91</td>
<td>222</td>
<td>313</td>
</tr>
<tr>
<td>Paddy + Maize</td>
<td>67.75</td>
<td>113.87</td>
<td>181.62</td>
</tr>
</tbody>
</table>

Source: Lakshman et al. (2007), Indian Silk

Another study conducted (Hajare, 2008) in Maharashtra shows that mulberry sericulture generates 170 man days; on the other hand, alternative crop combinations like soyabean-wheat, soyabean-gram and cotton-pigeon pea...
generates employment of 66, 61 and 65 man days respectively, which is shown in the following table.

**Table: 1.4: Employment Generation in Sericulture: A Comparative Analysis**

<table>
<thead>
<tr>
<th>Location</th>
<th>Crops</th>
<th>Gross Income Generated (Rs)/ ha/ YF</th>
<th>Employment (mandays)/ ha/ YF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khobana village, Maharashtra</td>
<td>Mulberry Sericulture</td>
<td>82315</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Paddy-Sunflower</td>
<td>33242</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>Soyabean-Wheat</td>
<td>23744</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Soyabean-Gram</td>
<td>18995</td>
<td>61</td>
</tr>
<tr>
<td>Dhapewada village, Maharashtra</td>
<td>Mulberry Sericulture</td>
<td>87778</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>Cotton + Pigeon pea</td>
<td>27633</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Soyabean-Wheat</td>
<td>26008</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Soyabean-Gram</td>
<td>21133</td>
<td>61</td>
</tr>
</tbody>
</table>

Source: Hajare et. al.(2008), Indian Silk, Vol.46.No.9

*(Survey Area: Two Villages of Maharashtra, Non-Traditional Belt of Sericulture)*

Thus, sericulture generates more employment in comparison to production of agricultural commodities.

Assam is popular for non mulberry sericulture or silk such as Eri and Muga. Muga silk is the monopoly of Assam in the world (Indian silk, 1979). The investments are generally low in case of Eri and Muga but the returns are high and quick. Following table shows that the cost and returns of Eri and Muga culture-

**Table: 1.5.: Cost – Returns of Eri and Muga**

<table>
<thead>
<tr>
<th>Items</th>
<th>Eri Culture</th>
<th>Muga Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Input Costs</td>
<td>800.00</td>
<td>10,106.00</td>
</tr>
<tr>
<td>Gross Returns (excluding family labour)</td>
<td>6,500.00</td>
<td>24,000.00</td>
</tr>
<tr>
<td>Net Returns</td>
<td>5,700.00</td>
<td>13,594.00</td>
</tr>
<tr>
<td>C:B Ratio</td>
<td>1:8.12</td>
<td>1:2.37</td>
</tr>
<tr>
<td>Crop Period</td>
<td>22-28 days</td>
<td>50-120 days</td>
</tr>
</tbody>
</table>

Source: CTR &TI, CSB, Ranchi and CMER &TI, CSB, Ladoigarh

**Note:** 1. Mandays = 8 working hours
Therefore, we see that sericulture especially Muga and Eri are economically viable industries in Assam. Since rural economy of Assam is still underdeveloped and stagnant; therefore by employing large number of rural women in this sector will help to develop the rural economy of Assam. As sericulture is mostly taken as a part time occupation in Assam, therefore it is essential to undertake this study, which will enable us to know whether sericulture is an appropriate technique to uplift the rural economy of Assam by employing rural land less people in the various sericulture activities. Again, this study will also help to examine the problems which are associated with sericulture for which it is not used as the primary occupation in Assam as is done in Karnataka and Andhra Pradesh in case of mulberry. Although, there is sufficient research of sericulture in the field of Zoology and Bio-technology, but there has been no systematic study of economic viability of sericulture in Assam specially Muga and Eri. Thus, the present study helps to find out the research gap of economic viability of sericulture in Assam in comparison to the other states of India and provide information to the Government and non Government agencies about the scope of these activities. The problems identified and suggestions given to improve each of the activities of Muga and Eri will be of immense help for policy makers and advocates of women development programmes to come up with plans so that Muga and Eri is taken up a full time activity.
1.6. Objectives of the study:

The study has the following objectives-

1. To look into the overall status of sericulture.

2. To assess the employment generation potential of sericulture in the study area.

3. To examine how sericulture leads to economic empowerment of rural women in the study area.

4. To study the domestic market structure of sericulture in relation to the different market channels in Assam.

5. To analyze the constraints faced by the people practicing sericulture in the study area.

1.7. Research Questions:

➢ Can Sericulture act as an economically viable industry in terms of employment generation?

➢ Will Sericulture lead to empowerment of the rural women?

➢ Is there an efficient market structure to look into different stages of Muga and Eri sector in Assam?

1.8. Methodology of the study:

This section basically describes methods and techniques of research used in the study. It deals with the following sub heads.
1.8.1. Research Design:

The ‘Expost-Facto Design’ is considered for this study because it is a systematic empirical study where all the events have already taken place i.e. the researcher has no control over the independent variable (Kerlinger, 1996).

1.8.2. Data Source:

The study is based on both primary and secondary data. Information regarding various aspects of the study is collected from different secondary sources.

- Data regarding Muga and Eri of Assam regarding plantation of host plants (its area), production, productivity etc are collected from the State Sericulture Offices.

- Data relating to production, marketing, price trends of Muga, Eri etc. at all-India and regional levels are collected from the various issues of ‘THE SILK’ published by Central Silk Board, and “The Indian Journal of Sericulture”
Websites of CSB and International Silk Association are utilized for data relating to issues of national and international perspectives on Muga and Eri.

The general and socio economic information of the state and the study district are collected from the Statistical Hand Books of Assam (various issues) and the Economic Survey of Assam (various issues).

The secondary information so collected has been supplemented by various research works encountered during the study, related books and journals.

In addition to the analysis done with the help of secondary information, three questionnaires were framed to gather the required information from the study area about the market structure, empowerment of rural women involving different stages of Muga and Eri and the problems faced by sericulturist in the study area. To collect information regarding employment generation at different stages of Muga and Eri silk production, officials from various departments of CSB were interviewed.

1.8.3. Study Area:

Kamrup and Goalpara districts of Assam have been selected for the study. The descriptions of the two districts are given below.

(a) Kamrup district:

Kamrup is an administrative district of Assam where capital Guwahati is situated. According to the 2011 census, the population of Kamrup is 1,517,202.
The density of population is 436. The literacy rate of the district is 72.81. Although the population of the districts is so high but the industrial scenario is not good. The total numbers of registered micro, small, medium enterprises in 2012-13 are 297, which were 318 and 391 respectively in 2011-12 and 2010-2011. Thus for livelihood, people must depend on agriculture and agro-based industries. Sericulture plays an important role in this district. The largest weaving cluster in the state i.e. Sualkuchi is situated in this district.

(b) Goalpara district:

Goalpara is one of the most under-developed districts among the districts of Assam. It ranks 18th in the Human Development Index amongst the 23 districts of Assam. Its headquarter is the only urban area of the district. The primary sector provides employment to about 75 per cent of its population whereas the share of the secondary and tertiary sectors stands at 5.2 and 19.6 per cent respectively (2001 Census). The number of registered factories in the district stands at 29 in 2000. Thus, though agriculture employs 75 per cent of the population in Goalpara, it has not led to much economic development of the region. In such a situation, sericulture is one such activity that can not only increase the income of the people, but can also generate employment opportunities, particularly for women. Sericulture in Goalpara district existed almost as a household practice amongst the people since a long time. The silk in general and Muga in particular has been closely associated with the rituals and traditions of the people. The rearing of Muga is an outdoor activity. Thus, it is entirely based on
the environment and in this regard, Goalpara is suitable because the district got the geographical identification mark for the production of quality seed cocoon along with East Garo hills district of Meghalaya.

1.8.4. Sampling Procedure:

From the two districts of Goalpara and Kamrup, four blocks are purposively selected for the study. These are Rangjuli and Balijana of Goalpara district and Sualkuchi and Boko of Kamrup district. Although Sualkuchi is not a development block (it falls under Hajo development block) but since it is the largest weaving cluster in Assam, therefore, it has been selected for the study. People involved in sericulture in the said blocks have been selected randomly. Size of the sample is determined by the following formula given by Taro Yamane

\[ n = \frac{N}{1 + Ne^2} \]

Where

\( n = \text{Sample size} \)

\( N = \text{Total Population} \)

\( e = \text{Error} \)
1.8.5. Analytical Frame Work:

To analyze the different objectives, we have used both primary as well as secondary data. First objective is analyzed by secondary data; the other four objectives are analyzed by considering both primary and secondary data. In addition to this, to solve the research question different statistical tool and economic methods are used such as Employment Based Analysis, Empowerment index, Shepperd’s market efficiency formula and Garret ranking technique.

To determine the nature of employment and number of employment opportunities in various stages of Muga and Eri the ‘employment based analysis’ (EBA) is used. Empowerment index is used to find out level of empowerment of women engaged in the different sericulture activities from which they earn income. Shepherd's formula for estimation of marketing efficiency of each important channel is used to determine the efficiency of market. Lastly, Garret ranking technique is used to find out problems face by the people practicing sericulture in the study area. All these methods and techniques has been explained in the respective chapter.

1.8.6. Instruments for data collection:

Questionnaire and Interview methods are used for collection of data. Interview method is used to collect information regarding nature and number of employment
generated in the various stages of Muga and Eri from various Government and non
government offices. Data collection was done during September 2013.

An appropriate questioner has been prepared which has three phases- first part is
constructed for collecting the information regarding women who are involved in
the various activities of sericulture. Second phase is for market information and the
third phase includes problem faced by the people practicing sericulture.

1.9. Policy Implications:

The proposed study will highlight the prospects of sericulture in Assam. It will also
analyze the status of sericulturist in respect of their prime income source. The type
of Government policies likely to help to undertake sericulture as a major
occupation in the study area will also be analyzed by this study. The study not only
estimates the amount of profit earned by the weaver or the reeler but it will help in
identifying people who benefit from sericulture activities in the study area.

Although there is a vast scope for sericulture in the study area but sericulture is
beset with certain problems. Such as, benefits from use of new technology, skill
up-gradation etc. are not taken up in most of the villages of the study area. Thus,
steps need to be taken so that sericulture can involve the unorganized labour forces
leading to development of the study area. Sericulture can be a strategy for rural
development in Assam as is seen in the states of Karnataka, Tamil Nadu and
Andhra Pradesh who have developed by adopting sericulture scientifically.
1.10. Chapter scheme:

The study consists of eight chapters.

**Chapter-1: Introduction:** It includes the background, conceptual frame work, rationality, objective, methodology, significance as well as the limitation of the study.

**Chapter-2: Review of literature:** Almost all the literature related to sericulture is thematically included in this chapter. The themes are- Origin of Sericulture, Sericulture and Employment generation, Sericulture and Income generation, Women and Sericulture, Sericulture and Rural Development and Problems of Sericulture.

**Chapter-3: Status of sericulture:** It includes the Status of sericulture in the world, in India, in Assam and in the study area.

**Chapter-4: Employment Generation through Sericulture:** It describes how sericulture generates direct and indirect employment.

**Chapter-5: Women empowerment through sericulture:** It analyzes how rural women can empower themselves by adopting income generating activities of sericulture in different stages.

**Chapter-6: Market structure of Sericulture:** This Chapter includes three markets of sericultural products viz., cocoon, yarn and finished product. It also describes the efficiency of cocoon, yarn and finished product markets.

**Chapter-7: Problems of sericulture:** It examines the overall problems associated with the different stages of sericulture.
Chapter-8: Summary of the findings and Conclusion: It includes major findings, policy implications and conclusion.

1.11. Limitation of the Study:

This study is a personal investigation for academic purpose. Therefore it has certain limitations such as limitation on time, resources etc.

Again it is based entirely on the opinion of the respondents who are uneducated rural people. They do not maintain any books of account regarding harvest and marketing transaction. Further shortage of time at disposal, limited resources, and unwillingness on the part of most of the sample respondents for spending more time for interview, absence of accounting habits also limited the scope of the study.

In addition to these, this study considers only Muga and Eri activities of sericulture. The other two activities of sericulture – Tassar and Mulberry are not considered here. So there is further scope for analyzing the economic aspect of Tassar and Mulberry. This, in the view of the researcher is another limitation of the study.
References:


20. Silk-XVL, 1962, CSB Bangalore

