Muga Silk Rearers: A Field Study Of Lakhimpur District Of Assam

Bharat Bonia

Abstract: Assam the centre of North- East India is a highly fascinated state with play to with biodiversity and wealth of natural resource. Lakhimpur is an administrative district in the state of Assam, India. Its headquarter is North Lakhimpur. Lakhimpur district is surrounded by North by Siang and Papumpare district of Arunachal Pradesh and on the East by Dhemaji District and Subansiri River. The geographical location of the district is 26.48' and 27.53' Northern latitude and 93.42' and 94.20' East longitude (approx.). Their existence of rare variety of insects and plants, orchids along various wild animals, birds. And the rest of the jungle and sanctuaries of Assam exerts a great contribution to deliberation of human civilization s. Among all these a peculiar kind of silkworm "Mua" sensitive by nature, rare and valuable living species that makes immense impact on the economy of the state of Assam and Lakhimpur district and paving the way for the muga industry. A Muga silkworm plays an important role in Assamsese society and culture. It also has immense impacts on Assams economy and also have an economic impacts on the people of Lakhimpur district which are specially related with muga rearing activities. Decades are passes away; the demand of Muga is increasing day by day not only in Assam but also in other countries. But the ratio of muga silk production and its demand are disproportionate. It is not increasing with respect to its demand.

Keyword: Muga, Rearers, Economic Impact, Lakhimpur, Assam.

1. INTRODUCTION:

In North-East India, the unique state of Assam located between 24 048' and 27'009' north latitudes and 89'082' and 96'110' east longitudes is famous for the world strongest natural protein. Muga silk is a variety of wild silk geographically tagged to the states of Assam in India. The silk is known for its extreme durability and has a natural yellowish golden tint with a shimmering, glossy texture. Lakhimpur is an administrative district in the state of Assam, India. Its headquarter is North Lakhimpur. Lakhimpur district is surrounded by North by Siang and Papumpare district of Arunachal Pradesh and on the East by Dhemaji District and Subansiri River. The geographical location of the district is 26.48' and 27.53' Northern latitude and 93.42' and 94.20' East longitude (approx.). The scientific name of muga is Antheraea Assamensis like other lipids of terra it is a holomethobelas insect that passes to four stages that egg, laver, cocoon Papua and moth. Muga is such a kind of insect that produces golden colour threads highly distinctive and valuable. The Brahmaputra valley of Assam is only place in the world were muga rearers have been rearing muga silkworm traditionally since time in memorial. In other state of north east India except Tripura it is found in wild form and people rear it after collecting from the jungles. Now day's people of the bordering areas Meghalaya, Nagaland, Arunachal Pradesh and Cooch Bihar district of west Bengal rear muga silk worm considering its economic importance. A large quantity of muga threads as estimated 98% of the total production of the country is produced in Assam only. However the same traditional practice for collection of seeds cocoons from the foot hills of Khasi , Garo and Nagaland is still followed by the muga rearers. Muga bears its historical heritage from pre historical time in Assam. Elocution is found in the Mahabharata at King Bhogodatta of kamrupa fought vigorously against the Pandovo wearing a turbine of muga cloth on his head. Even the Rig-Veda asks such to remember the construment garments produced out of golden threads. Further in the Arthasastra of Kautilya also found the importance of the muga silk that the golden muga cloth is the bestowal. In this way muga industry got transform into agro based industry and receives a majestic status and there after emerge into a new horizon. It is a matter of great pride that the muga industry in Assam and also Lakhimpur district as rich a leading positions and become self reliant in production of muga slik. Muga is an agro based cottage industry of Assam. Since it is an arboreal brings the rearers traditionally put them in trees like soum scientifically known as Persia bombisina and suallow litshiya monupetela. Some rearers even collect seeds cocoons from different districts of upper Assam, namely Lakhimpur and also other from Dhemaji, Dibrugarh, Sivasagar, Jorhat etc. and put them in a sokori pera made out of bamboo plates or cane. The growth and maturity of lavers depend mainly upon the climate.The lavers cane eating leaves for periods of 22 to 50 days and then become matured to weave their cocoons. Rearers collect and put them on saloni. And gain placed them in another tree full of leaves. During lavel periods the silkworm flow off their skin four times to enhance their growth while throne their skin the lavers is very sensitive. Various kinds of birds, snacks, monkeys are the enemies of the lavers. Laver becomes matured and it is called as Papua. All the matured worms are collected.

Marketing of muga silk from raw materials to finished products-

1) Marketing of muga seeds
2) Marketing of reeling-cocoons
3) Marketing of muga yarn
4) Marketing of muga fabrics
5) Marketing of silk wastes.

The marketing channel is defined as the path of transacting the product from the point of production to the point of consumption. Marketing agencies carry out the marketing system ensures better economic returns and higher standard of living of the rural farmers.

1) Marketing of muga silk/seeds:

- *Bharat Bonia, Lakhimpur, Assam.*

Muga silkworm rearers purchase muga seeds directly from the seed growers either in the form of seed- cocoons of eggs.
There are two types of growers:
a) Government, and
b) Private.

The commercial rearers can collect the seeds (Eggs) from any government farm or from the regional muga research station.But traditional rearers are reluctant to accept seeds from government farms because:

a) The traditional rearers prefer homebred eggs,
b) They fear that the farms don't collect seed-cocoons during the peak period of collection of larvae (bhorpok), which they believe is the best periods of seeds.
c)

2) Marketing of reeling-cocoons:

Six distinct category of buyers of commercial cocoons are identified-

a) Domestic weaving purposes
b) Muga raw material bank (MRMB)
c) Khadi and gramoudog Board
d) Direct marketing by rearers
e) Intermediaries
f) Small reeling and reeling-cum-weaving.

Middlemen are two kinds-the petty middlemen who collect commercial cocoons in small quantities from the village level rearers and sell them to wholesale traders. The middlemen are considered to be the primary agency of collecting reeling-cocoons because they are like the bulk suppliers of muga reeling-cocoons collected from individual growers of muga concentrating areas. They are the key business personnel that assemble the cocoons and supply them to the traders-cum-reelers and manufacturers.
The entire marketing process of muga cocoons is virtually controlled by a group of traders-cum-reelers and manufacturers who usually purchase cocoons through intermediaries.

3) Marketing of muga yarn:
The muga fabrics manufacturing units collect the required quantity of muga yarn from various sources-

a) Manufacturers purchased from cocoon market functionaries.
b) The yarn dealers

Most of the reelers are using traditional appliances called 'Bhir' for producing yarn. But the quantity of machine made yarn is better than 'Bhir' made yarn.

4) Marketing muga fabrics:
In marketing of muga fabrics is primary done by women (artist). They make saneki of various styles. Sualkuchi is the only place for commercial muga silk weaving in ASSAM.

5) Marketing of silk wastes-
a) Silk wastes, the unreel able part of the cocoons and,
b) The pupae inside the shell of cocoons, which emerge after reeling.

Socio- Economic conditions of Sample families:
We take two villages at Lakhimpur district as our sample in the whole study.
Education level of the sample Rearers:

Table-1

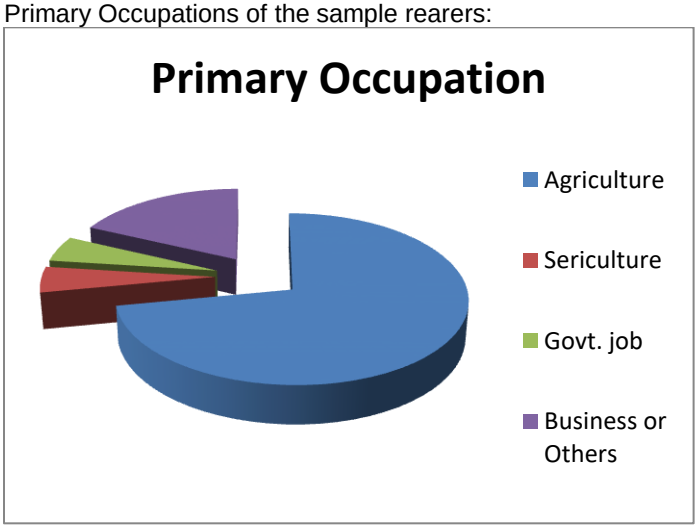
Education	No. of sample Rearers	Percentage
Illiterate	1	2.5
Under HSLC	10	25.0
HSLC	18	45.0
Under graduate	11	27.5
Total	40	100.0

Source: Field Survey.

The table shows the education levels of the sample Rearers family. It is found that the literacy rate among of the sample is 97% (aprox), Where 27.5% of the rearers are below 'HSLC' level, which indicates that muga culture is basically confined in the hands of partially educated people. Because above HSLC are goes to other activities. Only 2.5 % people are illiterate. 25% are under HSLC, 45%are HSLC, and 27.5% are under graduate.

Occupations of the Sample Rearers:
Occupations of the rearers are different to each other. Occupations of the rearers of sample families are divided into different categories:
a) Primary,
b) Secondary.

Primary Occupations of the sample rearers:

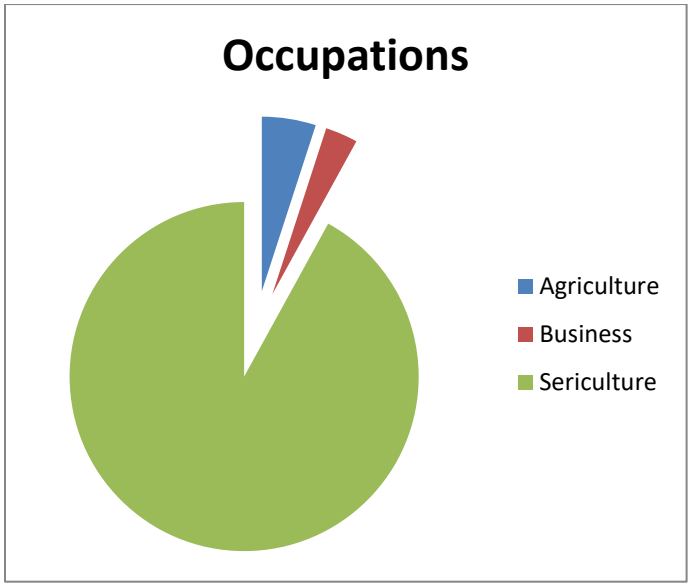


Source-field survey

Pie Chart-1

The above pie chart shows the Primary occupations of the sample rearers. Agriculture is the main occupations of the rearers, where they are dependent on agricultural (72%) productions. They mainly cultivate paddy and then vegetables, etc. Their second dependent occupation is business or other activities (18%). Followed by business they are also engaged in Government services also (5%). Only 3% of the sample rearers family mainly dependent on sericulture as their primary occupation.

Secondary occupations of the Sample rearer families:
Occupational status of the family influences the family income and its source, and the social and economic conditions of the family and Livelihood conditions of the family and again standard of living. The primary and secondary occupations of the rearers are grouped into two categories such as Agriculture, sericulture, Government services, Private jobs, Businesses, etc.



Source- Field survey

Pie chart-2
In muga silkworm rearing, all the family members of the rearers right from teenager to adults, irrespective of sex, participate actively. Silkworm rearing being a tough job, the participation of male is much higher than the female in it. In early days females were not even allowed to enter into the rearing field (sumoni) of muga silkworm, because of 'Taboo and superstitions' attached to it. But, now a day's females are also participating in rearing activities along with the male members of the family.

Muga silk rearering and its Economic Impacts on the rearers families in surveyed areas of Lakhimpur district:
It is difficult to ascertain the economic condition of the rearers families on the basis of their income exclusively from muga culture, as the agricultural families undertake muga culture as a part time occupation along with other activities. But as we seen during our field study that economic conditions of the muga cultivated people are not very well comparative to other occupations. They are lived in rural backward conditions. Income generated from the muga rearing activities is not enough to mitigate their needs. They are the people who aged above from 30 to 60 years old. They are not the young age men. Young men are reluctant to engaged muga silk rearering activities. Silkworm rearing remains basically a household activity, which offers a bright prospect in terms of self-employment opportunities. In muga silkworm rearing, all the family members of the rearer can find employment at the doorstep. Silkworm rearing process involves intensive care, careful handling, close monitoring and supervision by the rearers for better harvest. Though muga is very popular to a certain section of the population and yield more net profit per unit of investment, its undertaking requires more capital and also it involves more risk compared to the other ventures. Education is the key factor for the development of muga silk industry because the level of acceptability of modern technology, therefore, productivity, by and large depends on the educational attainment of the rearers and other members of the rearers families. Primary source of income of the 72% of rearer families is agriculture, followed by daily wage labour or business (18%), Govt. service (5%), and sericulture (3%). Muga culture is only a part time/ secondary source of income f the rearer families.

Family members engaged in muga activities of the sample rearers:

Table no.2

Family Member	No. of Sample Rearers	Percentage
1-3	9	22.5
3-5	24	60.0
5-7	7	17.5
Total	40	100

Source- Field survey

Above table shows the family members engaged in muga related activities. In this table family members from 1-3 in 9th of sample of rearers are engaged about 22.5%. Again 3-5 members of 24th sample rearers are engaged about 60%.

People participations in Muga related activities:

Table no. 3

Age group	No. of Sample Rearers	Percetage
20-30	1	2.5%
30-40	11	27.5%
40-50	13	32.5%
50-60	6	15%
60-70	5	12.5%
70-80	4	10%
Total	40	100%

Source-Field survey

The above table shows the participations of the sample rearers family's members in Muga related activities. In this

table shows that age grouped from 30-40to 70-80 the percentage of work participation in muga related activities is about 97.5%. It is also seen from the table that the Youth or age grouped of 20-30 the rate of participation is only 2.5%, which is lowest from all age grouped. It is refers from the above table that the participations of the Rural Youth is gradually declining among the sample rearing families.

Employment generated by Muga:
Muga silk industry is labor intensive. Continuous employment of labour is necessary right from the plantation of muga silkworm feed plants to the production of finished products. As estimated 2lakhs weavers are directly involves in about 1lakh 50000 looms in Assam who have been contributing excellently accelerating and strengthening the economic foundation of the state and producing heaps of muga cloths every now and then. An attempt has been made here to estimate the extent of labour employment on the basics of all the activities involved in muga silkworm rearing, specially the time schedule of some important broads practiced. Study shows that in the sample rearer households, about 16600 mandays in Lakhimpur district, compared with sivasagar district has employed the highest 17237 mandays of labour (2005-06). The hired labour participation rate is very low to the total labour employed in muga silkworm rearing; it is only 4.52 %(750mndys) in Lakhimpur, followed by Sivasagar (4.51%).Muga silk rearing involves different types of activities like plantation and maintenance of plants, collection of seed cocoons, egg production, rearing of silkworms, cocoon production and marketing. All these activities are considered as agricultural, while reeling of yarn and making fabrics are considered as manufacturing.

Reasons for backwardness:
There are numerous reasons of backwardness of these rearering families of the sample areas. Their economic, social status, health, infrastructure facilities are not good at all. Some reasons for backwardness of those people are given below.

a) Results of population growth:
Results of population growth aggravate the poverty of the people. The growth of population is exceeds of national income. Rapid population growth not only creates poverty but also reduced per capita income which leads to increase poverty.

b) Size of family:
Size of the family is also another factor for poverty in rural areas of sample surveyed areas. The larger the family size, lower the per capita income, standard of living and less facilities. The existence of joint family system also hamper on their standard of living.

c) Low agricultural productivity:
The productivity of agriculture sector in rural areas is not high as we assume. The real sceniors indicates lower production. Lack of irrigation facilities, credits, fertilizers use and traditional methods of cultivation are the main reasons of lower productivity of agricultural sector.

d) Disparities in distribution of land and other assets:
The distribution pattern of land and other assets holding is unequal. As we know land and other assets are the source of income in rural areas. But, unfortunately, there has been unequal distribution of land and other assets in rural areas.
e) Lack of employment facilities: The sample surveyed families main occupation is agriculture. There are not enough facilities to engaged in other activities for their livelihood. Therefore, a large part of people remained as unemployed. So they just engaged in agriculture as labourer where their productivity is nearly zero.

e) Education:
Education plays main important role for the upliftment of society, community and specific area also. Education is an agent of social change. The earning power is endowed in the individual by investment in education and training. But in rural sample surveyed areas educational level of the people is not good. It is no doubt that they are literate but their educational level mostly below HSLC. There are various reasons along with above all mentioned reasons for their backwardness. Lack of infrastructural facilities, medical facilities, institutional credits facilities; leakages in govt. schemes are also reasons for their present situations.

Suggestions:
During survey, it is found that sample rearers faced many problems, mainly marketing problem, climate problem and financial problems. Based on these above problems following suggestions are given:

a) Highly developed training should be given to muga rearers, as regards rearing practices, disinfection of rearing houses.
b) Government and sericulture department should immediately establish a market for muga silk product and determine an eligible price for muga silk products in own district.
c) To meet the present demand for seed cocoons, some muga seed zones are to be remarked and scientific seeds farms should be established in the lakhimpur district of assam.
d) The information gap between the government and rearers as well as weaver, as regards sources of finance, availability of modern technology, market etc. should be bridge by a network of publication radio, television, public meeting, etc. This will help the new generation.
e) Climate conditions or environment conditions are a big problem of the rearers. To save the cocoons from climate hazards it should keep in a secure room, which is scientifically developed.
f) Government should provide adequate insurance facilities to the rearers. It helps them when they face losses.

ACKNOWLEDGEMENT:

Our sincere thank to Miss Trishna Senapoti for her supportive help. We especially thanks to the people of sample surveyed village- Gohain tekela and Dhulpeta gaon of Lakhimpur district where we did our field survey and collect some basic data.

REFERENCES:

[1] Devi,Dipali, Sarma,S,Neelotpal, Talukdar,Bijit, Chetri,Prafulla, Baruah,KC. (2011) 'Study of the structure of degummed Antheraea assamensis (muga) silk fibre', Journal of the Textile Institute 102(6), 527-533.

[2] Kalita, T, Dutta, Karabi(2014) 'Biodiversity of sericigenous insects in Assam and their role on employment generation'. Journal of entomology and zoology studies 2(5), 119-125.

[3] Mahan, Bandana (2012), 'Silk industry among the Tai-Ahom of Assam, India as an attraction of tourist', International Journal of Scientific and Research Publications 2(12), 1-4, 2012.

[4] Peigler, S, Richard (1993). 'Wild silks of the world'. American Entomoligist 39(3), 152-162.

[5] Phukan R, Choudhary SN. (2006) 'Traditional knowledge and practices involved in Muga culture of Assam'.CSIR.