

## **Problems of Traditional Muga Culture and Its Impact on Rural Development : A Study on Titabor Sub-Division of Jorhat District**

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### **Introduction:**

This paper entitled by “The Problems of Muga Culture and its Impact on Rural Development : A Study in Titabor Sub-division, Jorhat” is mainly concerned with key concepts, one is ‘Muga Culture’ and another is ‘Rural Development’.

Muga culture is the most pre-dominant sericulture industry that occupies an eminent place in preserving Assam’s heritage and culture.

According to Jances H. Crops “Rural Development is a process through collective efforts aimed at improving the well being and self realization of people living outside the urbanized areas.”

Muga culture plays a vital role in the economy of rural people of Brahmaputra valley. Muga culture is an important cottage industry of the valley engaging families, which earn their livelihood from it either directly or indirectly.

### **Significance of the Study:**

The Muga culture has a great prospect in respect of production and employment opportunity in the areas under Titabor sub-division with a suitable environment. But the present status of this culture in this area is not satisfactory. So, it is significant to study this problem scientifically.

### **Objectives of the Study:**

The objectives of this study are :

1. To identify the problems and limiting factors of Muga culture in this area.

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2. To access the impact of Muga culture on rural development of this area.
3. To give some possible ways to solving these problems.
4. To create awareness among the people about the greater possibility of the culture and its development.

**Methodology:**

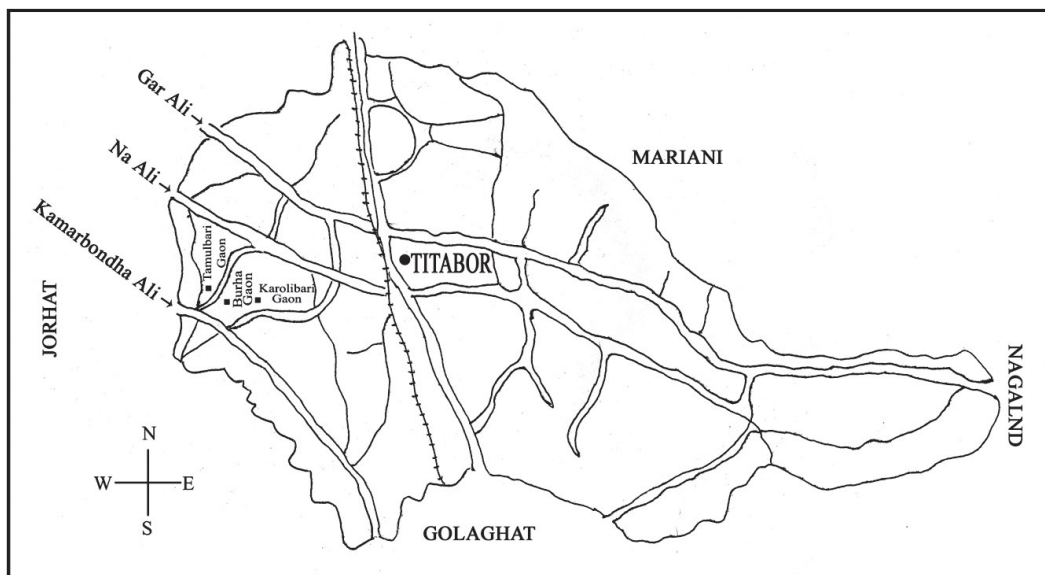
To conduct this study we used the field study method using interview observation, and sampling as a technique.

**Study Area:**

The area of this study is Titabar sub-division. Jorhat, which is situated  $94^{\circ}9/36//$  East longitude to  $26^{\circ}35/10//$  latitude. It is 121 m. height from the sea level. Titabor is situated in the southern direction from Jorhat at the distance of 19 k.m. from the district head quarter. We select following villages under Titabor Sub-Division as our sample unit for this study (Fig.1). These are :

1. Karoli Bari village.
2. Burha Gaon village.
3. Tamulbari village.

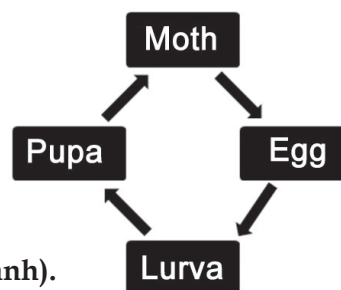
**Fig.1 : Map of the Study Area**



Our paper is an attempt to highlight the problems of Muga culture and its impact on rural development, specially in the Titabor sub-division. But before going to the main topic it is needed to talk about the Muga culture. But it is a broad subject. So, we try to summarize the subject as such :

- **Muga silk** : The most prestigious yellow coloured Assam silk.
- **Muga worm**: One type of worm from which Muga silk is yarned. The scientific name of Muga worm is *Antheraea Assama*.
- **The life cycle of Muga worm : 4 stages of life cycle are (Fig.2) -**
  1. Pupa or chrysalis (leta)
  2. Moth or adult (chakari)
  3. Egg (koni), and
  4. Lurva or caterpillar (polu).

Fig.2 : Life Cycle of Muga Worm



- **The lasting period of the cycle:**
  1. About 50 days – in summer.
  2. About 150 days – in winter.
- **The complete life -cycle is called as Brood (Banh).**
- **Generation in a year maximum six (6) crops :**  
These are - (1) Chotua (March-Apr) (2) Jethua (May-June) (3) Aherua (July-Aug) (4) Bhodia (Aug-Sep) (5) Kotia (Oct-Nov) (6) Aghunea (Dec-Jan)
- **Climate** : The required climatic temperature for Muga worm rearing is 25%-80%.
- **Host Plants** : The commonest host plants of Muga worm are (Table-1)-

**Table-1**  
**Types of Host Plants use for Rearing Muga Worms**

Group	Popular Name	Distribution	Remarks
Primary	Som	Natural distribution also cultivated, former in hills and latter in plains	Principal host plant specially in upper Assam.
	Sualu	Common in plains, also in hills	Principal host plant in lower Assam

Secondary	Mejankari	Common in hills also in plains	Only vigorous worms thrive creamy silk.
	Digloti	Wild in plains	Substitute, other worms also thrive.
	Chapa, panchopa or Titachapa	Common in plains	Big tree, Creamy, silk.
Tertiary	Bogori	Common in plains	Quick growing, drought resistant. Also for tassar worm.
	Bhomlati Bhomroti	Common in plains	Substitute.
	Bajramani	Sporadic distribution in plains	Several varieties exist.
	Gamari	Wild, sporadic in plains, also in hills.	Substitute, good timber.
	Kotaloa	Wild in plains	Substitute.

Source : Muga Silk Industry, A Book Published by Directorate of Sericulture and Weaving Government of Assam.

The traditional instruments used in muga culture are presented in Table-2

**Table-2**  
**Traditional Instruments used in Muga Culture**

Sl. No.	Stage	Using Tools
1	Rearing	Sandoli, Dhenu-Kaar, Batolu Guti, Kur-Katari, Khora, Jali, Khorika, Chak, Dola, Chokari Pera etc.
2	Yarn	Jotar, Hir-soli, Uni-sal, Lat-sal, Bhauri, Siri, Letai, Chereki, etc.
3	Weaving	Tant-sal

#### **History of Muga Culture:**

The history of Muga culture in the Brahmaputra valley is as old as the epic age. Muga worm was the most common and plentiful in the valley in several

centuries ago due to its suitable atmosphere. The development of this culture was patronised by the ancient kings of Assam. As a result of which it becomes an obligatory part of every household to rearing and weaving silk.

**The Present Status:**

But it was declined during the British regime. The some plantation areas were assessed for taxation. Gradually the interest in this culture declined among the common people. But, some people still to be engaged themselves in this unique culture. Though all communities and castes rear Muga worm, it is mainly practised by the Ahoms, Kacharis, Garos and Rabhas in different parts of Assam like Lakhimpur, Dibrugarh, Sivasagar, Jorhat, Darang etc.

In Titabar sub-division of Jorhat district this culture is commonly practised by most of the people of Thengal Kachari and Ahom community. There is a Sericultural Training Institute in Titabor, which gives an opportunity to develop this culture. Besides it the Sericultural Farm (estd. 1919) and the Central Silk Board (estd. 1944) are the two main institutes in this area. But, though such institutional provisions are there, the complete success through this culture yet to be come.

The occupational pattern is also rapidly changed among the rural people of this area since last ten years. The traditional rearers diverted from their traditional occupations to other modern occupations which gives them better economic support (Table-3).

**Table-3**  
**The Main Occupational Source vs. Involvement of People at Present**

Sl. No.	Main occupational source	Percentage of involvement of people
1	Paddy cultivation	65%
2	Tea plantation	13%
3	Sericulture	11%
4	Govt Services	7%
5	Others	4%
<b>Total</b>		<b>100%</b>

Source : Self enumeration.

**Problems:**

There are some basic problems in the traditional Muga culture which have a negative impact on our rural development. These problems are :

1. **Climate Change:** The required temperature for Muga worm rearing is 25% to 80% but due to sudden change of climate there are several problems arises in the traditional Muga culture.
2. **Industrial Affect:** The Dholi Cement Factory and Flour Mills are the main industrial institutes in Titabar area. These factories highly affected the Muga culture of this area by emitting smoke and dangerous chemicals in the air, water and soil.
3. **Long Term and Hard Process:** Due to long term requirement and hardness of the culture it is become impossible for rural people to fulfil all the needs of livelihood in present costly situation.
4. **Tea Plantation:** The Muga culture gives certain return because its productivity is mostly depending on climate. So the villagers are attracted to new remunerative occupations. In such a condition the villagers are mainly motivated to tea plantation.
5. **Growth of Population:** Due to the growth of population the area for host plantation is gradually becoming short. But to rearing Muga worm the host plantation is very important and it requires a big area to continuing the culture.
6. **Non-availability of Healthy Seed Cocoons:** Because of degeneration of Muga worm, after two or three generations, it is needed to started the operation of whole Muga culture newly every year. So, it requires availability of healthy seed cocoons. But, they have not any good infrastructure for healthy seed cocoons preservation. So, due to problems of preservation and transportation of seed cocoons of this sensitive Muga worm rearers have to undertake long and arduous tracking in search of it and collect it in a high cost.
7. **Unpredictable Harvest:** The harvesting is unpredictable in Muga culture because the Muga worms are reared in outdoor. So, its productivity is fully dependent on the nature.
8. **Natural Enemies:** As the Muga worms the larva are prove to affected by different natural enemies and diseases like insects, pests, birds, parasites, pebrine, flacherie, grassarie etc.
9. **Fatalistic Attitude:** The traditional rearers engage in Muga culture with a fatalistic attitude, so productivity is very low among them. This culture is

not commercially practiced by them.

10. **Highly Dependent on Traditional Machineries:** The traditional rearers were highly dependent on age old instruments. They were ignored and uninterested about the modern machineries and techniques till today. Consequently, they not get a good return from it.
11. **Middleman's Hamper:** Selling of Muga cocoons or products in direct district farms or market is a profitable business. But traditional rearers not directly sell these cocoons in proper place. The middlemen purchase it in a low price and sells in a high rate. So, the profit certainly goes to the middleman's hand.
12. **Increasing Price:** Due to the rapidly increasing price of seed cocoons, yarn and other respected materials, the Muga rearers or weavers faced problems to practiced this traditional culture.
13. **Insufficient Institutional Facilities to the Muga Worm Rearers:** Though now the Directorate of Sericulture and Weaving Department of Assam or Central Silk Board gives some facilities to the peoples engaged in Sericulture but these facilities are not sufficient to continue such an outdoor rearing culture like Muga worm rearing.
14. **Hazardous Rearing:** The Muga worm rearing is hazardous. The cost of grainage operations is very high and return is very low and uncertain. So, it is taken only as a subsidiary source of livelihood by the traditional rearer, not as a main source.
15. **Remoteness of Area Operation:** Muga worm rearing is possible only in the outdoor setting. To rearing it, a peaceful environment is very essential. Because of its sensitive nature, it is necessary to kept remoteness of area operation. It is a difficult task to take full initiative to the operation.
16. **Negligence of New Generation:** Negligence of new generation is one another cause of low productivity of this Muga industry. New generation uninterested to traditional Muga farming.

**Possible Ways of Improvement:**

1. **Systematic Host Plantation:** Assam's climate and soil is suitable for Muga food plant. The main food plant of Muga is som and sualu in this area (Fig.3).
2. **Tea Plantation:** For rural economic development of people of this area tea cultivation is necessary. But tea cultivation hampers Muga rearers in different times of rearing. So, there should be a mutual understanding between both tea planter and Muga rearer.

3. **Pollution:** Factories, mills etc. should not be permitted to grow in nearby areas of farming. Govt. should take necessary step to controls all these purpose.
4. **Technology:** Instead of indigenious technology new scientific technology should introduce to villagers in different purpose like host plant cultivation, maintenance, Muga worm rearing, seed technology, pest and disease management etc.
5. **Disease Free Seed Supply:** Disease free seed should supply by Govt. to Muga farmers and also introduced newly invented medicine like 'Mugaheal' to proper maintenance of worms. Successful Muga worm rearing depends on seed quality. Healthy seed cocoons should supply by farm managements or trained the villagers how to take disease free seed.
6. **Population Control:** To control population social awareness is must. People should make aware about the birth controlling measures by Govt. and non Govt. organization. Otherwise there are no place to sericultural host plant plantation.
7. **Development of Scientific Attitude:** Through the development of scientific attitude the age old superstitions in Muga culture can be reduced from the people.
8. **Establishment of Weaving Industry:** Like Suwalkushi in lower Assam there is also necessary to establish some weaving industries in upper Assam.
9. **Control Over Price:** Govt. should take necessary steps to control over price in seed cocoons, yarn and weaving materials.
10. **Indoor Rearing:** Muga culture is practised in outdoor. So it is very problematic. But recently countries like China started indoor rearing of semi domesticated other worms as like Muga in a room. It is very hopeful sign, if such procedure can be applied in Muga rearing.
11. **Healthy Moth:** Weak moths should not be used for egg production.
12. **Strictly Guarding:** According to villagers birds like owls and flying mammal like bats cause extensive damage to Muga silk worm in late evening. Also garden lizards, snakes and some birds attack Muga silkworms in the early morning. Therefore, strictly guarding the Muga worm in the early morning hours and late evening hour is necessary.
13. **Reduce Middleman's Hamper:** To reduce middleman's hamper from sericulture, farmer sell their cocoon, yarn or finished products in farms or district centres only, not to the middleman's hand. Otherwise they can't get the actual price of these.



**Conclusion:**

In conclusion, we may say that there must be a solution under every problem. Though this Muga culture is problematic in some aspects, but it is also not incurable. The development of traditional Muga culture is also possible in the present age of science and technology. But for this, total co-operation of all people including farmers, rearers, weavers, businessman along with govt. is very essential, through which we may get an environment to fully progress this culture as like a key to rural development.

**Fig.3 : Some Photo Features of Host Plantation & Using Tools in Muga Culture**



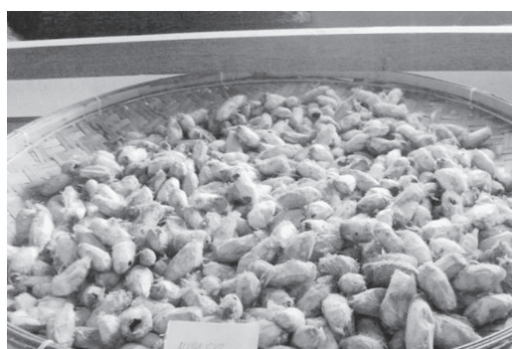
**Somoni**



**Chakari with Kharika & Koni**



**Sandoli with Polu**



**Leta**

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