



## *BEST PRACTICE 1*



## **Som (*persea bombycina*) Plantation and Rearing of Muga Silkworm**



**DUDHNOI COLLEGE  
DUDHNOI, GOALPARA, ASSAM  
PIN: 783124**



## **Title of the Practice:** Som (*persea bombycina*) Plantation and Rearing of Muga Silkworm

### **Introduction**

Som (*persea bombycina*) plantation is more prevalent in Upper Assam and is used for rearing of muga silkworm. These host plants are the primary food plants of silkworm, producing reeling cocoon which in turn produces muga silk. Muga silk is exclusive to the state of Assam in India with protected Geographical Indication (GI) Tag. In the institutional campus of Dudhnoi College, som plantation acts both ways – greener campus and commercial benefits.

### **Objectives of the Practice**

Som or *persea bombycina* belongs to the genus *persea* of evergreen trees. They are known to provide shade during summer and protect from harsh winter winds. Spread over 2.5 hectares of land, the main objective of this practice is to retain greenery in the campus and generating financial benefits from rearing of muga silkworm.

### **The Practice**

The plantation of *som* in Dudhnoi College began in November of 2000. The government of Assam undertook a scheme called **Golden Thread** for the benefits of som rearers throughout the state. Under that scheme several *som* plantation began in different parts of Goalpara District. The then BDO and Extension Officer of Kushdhowa Development Block, Mr. Bimal Sarma as instructed by DC Goalpara undertook a Project in Dudhnoi College for *som* cultivation. The college allotted 2.5 hectares of land for that purpose. The then Principal i/c Mr. Kshirode Khakhalary formed a self-help group comprising Dr. T.C. Kalita, Associate



Professor, Department of Zoology, Sobheswar Basumatary, Nikon Sutradhar, Tarani Kt. Ray, Sanjib Rabha, Polen Rabha and Kuladhan Rabha to look after the plantation. The *som* saplings were supplied by the sericulture farm of Balasara, Dudhnoi and the self-help group of the college began plantation in April, 2001. The then Chief Minister of Assam, Tarun Gogoi inaugurated the *som* garden of Dudhnoi College alongwith the ‘Golden Thread Project’ of Goalpara District. Muga silkworm cultivation was carried out in the garden continuously upto 2006. However the cultivation was discontinued for various reasons like inavailability of additional workers, etc. The garden though was regularly maintained. In the year 2022, under the supervision of present Principal of Dudhnoi College, Dr. Lalit Chandra Rabha, the muga silkworm rearing was revived by bringing in expert traditional muga silkworm rearers.



### **Advantages**

The advantages of having *som* garden in the campus mainly has two benefits: a) *som* or ‘*persea bombycina*’ is an evergreen tree and thereby adding greenery and wilderness in the campus throughout the season, and b) it is the one of the primary source of food for wild silk ‘muga’ producing insects feeding on its leaves.



## **The Outcomes**

Besides the added greenery, there has been some amount of monetary benefits from the sum plantation. The first two consecutive years of muga silkworm rearing in the plantation has garnered upto Rs. 5000/- as profit in 2005 and 2006. After the recent revival of muga silkworm rearing in the garden there was again an additional surplus of Rs. 5000/- (five thousand rupees only) which was handed to the college authority by the traditional rearers from Dhemaji District of Assam.

## **Challenges**

One of the challenges encountered during this period since its initial stage is the lack of expert supervision in the field of this practice. As per reports and research studies, this is a common problem encountered all over the state of Assam. The institution also lacked to locally source full-time muga rearers and plantation care-givers.

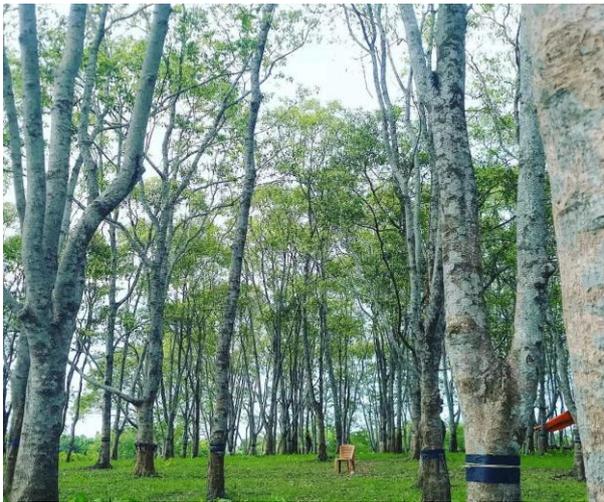
## **Resources Required for Improvement**

The institution can take the following measures to drive the practice to its full potential:

- i) A chunk of investments needs to be released immediately for proper maintenance of the plantation.
- ii) Appointment of full-time rearers having proper knowledge and expertise on muga silk worm cultivation.
- iii) The institution may seek aides and collaboration from Government organizations/institutions/departments of this field.



## Photographs of Som garden and Rearing of Muga Silkworm in Dudhnoi College





## **Certificate Course in Sericulture (Muga Culture)**

In order to make the sericulture cultivation and production more familiar to the College students, the department of Zoology, Dudhnoi College offered a certificate course in “**Muga Culture**” from 11<sup>th</sup> April, 2022 to 4<sup>th</sup> June, 2022. The certificate programme was made available to all the students of Dudhnoi College with the aim of raising awareness of MUGA among the youths.

### **Objectives of the Course:**

- Motivate the educated youths/ students for sericulture specially cultivation of Muga food plants, rearing of muga worms.
- To motivate the youths for production of commercial muga seeds (eggs for rearing)
- To generate self employment opportunity.
- Restoration of eco-friendly environment through cultivation of som plant.
- Resource generation for sericulture industry through production of Muga cocoon and production of Muga seeds.

### **Course Details:**

The Certificate Course in Sericulture (Muga Culture) has been conducted from 11<sup>th</sup> April to 4<sup>th</sup> June, 2022 for 16 days. Per day 2 hours classes have been taken and hence the course continued for 32 hours for both theory and practical. Total 300 students registered and participated in this course. The resource persons for this programme were the faculties of the Zoology department of Dudhnoi College. Dr. Tapan Ch. Kalita, Associate Professor of the department of Zoology has been appointed as the course co-ordinator to carry out all the required activities for smooth functioning of the course. This course mainly covers topics like introduction to sericulture; problems and prospects of sericulture in Assam, types of culturable silk moth in North East India, introduction to Muga (*Antheraea assama*) silk worm and its life history, different food plants of Muga silk worm, environmental conditions for Muga culture, food plants and its management, selection of seeds and its hatching, rearing of different instars, transfer of larvae from one food plant to other for feeding, preparation of cocoon building device and collection of mature larvae for cocoon formation, separation of pupae from cocoon and maintenance of adult moths for breeding and egg production, conservation of eggs for future culture etc.



## Students attending practical class of Certificate Course



*L. Rabha*

**Dr. Lalit Ch. Rabha**  
Principal, Dudhnoi  
College