

# ENTREPRENEURSHIP DEVELOPMENT IN SERICULTURE SECTOR OF ASSAM

**Dr. Monimala Saikia**

Assistant Professor,

Department of Sericulture, Faculty of Agriculture,

Assam Agricultural University, Assam

Sericulture, particularly eri and muga culture plays a remarkable role in generating employment and income in the slowly progressing rural economy of Assam. Four varieties of silkworms are commercially exploited in this region. They are mulberry (*Bombyx mori* L.), muga (*Antheraea assamensis* Helfer), eri (*Samia ricini* Donovan) and temperate tasar (*Antheraea proylei* Jolly) silkworm. Assam contributes the major portion in India's eri and muga raw silk production i.e., 5049.3 MT and 197.9 MT respectively (Anon., 2020) and thereby ranks first in non-mulberry production of India. Sericulture is a multi-task oriented industry involving food plant cultivation, silkworm rearing, silkworm egg or seed production, silk reeling or spinning for raw silk yarn production. It also deals with twisting of raw silk yarn, printing and dyeing, weaving and finished product preparation. The industry combines different on-farm and off-farm activities. Entrepreneurship can be generated from all the sectors of sericulture. To start a sericulture business, entrepreneur has to start with a business plan. A sericulture entrepreneur should have knowledge on current Indian and foreign market scenario, knowledge on present market demand and supply and also knowledge on estimated future market demand and forecast. An entrepreneur should also possess an idea regarding costs involved in the enterprise.

## ENTREPRENEURIAL OPPORTUNITIES IN SERICULTURE:

**1. Raising and supplying of high yielding mulberry saplings:** In any perennial crop, initial establishment plays an important role in subsequent growth and yield and mulberry is not an exception to this. Mulberry can be propagated by sexual and asexual method. To get true to type, mulberry is generally vegetatively propagated through stem cutting. In the farmers garden initial establishment is not upto the mark due to various factors. Therefore, planting of sapling is more advantageous than planting of cutting directly in the main field. Sapling is a rooted cutting

of specific age i.e., 100-120 days for low or high bush and about 240 days for small trees. S1635, K2 and S1 varieties are recommended for plain areas of north-east region whereas BC259 and TR 10 varieties are recommended for hilly areas of north-east region of India. Production and supplying of saplings in a mass scale can be taken up as an enterprise.

**2. Raising and supplying of different non mulberry silkworm host plant seedling:** The main food plants of muga silkworm are som (*Persea bombycina*) and saulu (*Litsea polyantha*). Primary food plants of eri silkworm are castor (*Ricinus communis*) and kesseru (*Heteropanax fragrans*). The secondary food plants are tapioca (*Manihotesculenta*), payam (*Evodia flaxinifolia*), borpat (*Ailanthus grandis*), borkesseru (*Ailanthus excelsa*) etc.

Production and supply of seedlings of these host plants can be a profitable venture as most of the sericulture farmers of Assam is involved in muga and eri culture.

**3. Mulberry leaf producer:** Landless farmers which are cocoon growers need huge amount of mulberry leaves for mulberry silkworm rearing as mulberry foliage is the sole food of this silkworm. Cocoon grower or silkworm rearer will buy leaves from mulberry growers and then use them feeding silkworm. Therefore, mulberry leaf supply can be a good enterprise. Again, mulberry leaf is used for different products like mulberry tea, leaf vinegar, leaf wine, leaf drink etc.



**4. Silkworm seed producer:** “Seed producer” means a person engaged in the production of silkworm seed and registered under section 8E of the Central Silk Board Silk-worm Seed Regulations, 2010 (Anon., 2021). According to this Act –

(a) A seed cocoon producer shall possess the knowledge of rearing of parent silkworm races and he shall undergo training in silkworm rearing for not less than one month in a sericulture institution under State or Central Silk Board or any other recognized institution.

(b) A seed cocoon producer shall possess food plantation and a disinfestable rearing house or rearing space with rearing appliances for seed rearing.

(c) A seed producer should undergo individual moth examination for detecting pebrine incidence and pebrine infected eggs shall be separated and burnt.

(d) The eggs shall be washed with formalin or bleaching powder solution and packed after drying in shade in muslin cloth bags or wooden frame box in unit of fifty grams and labeled. Silkworm seed in the country is produced by various stakeholders i.e., Central Silk Board (CSB), State Sericulture Departments, NGOs and Private entrepreneurs.

**5. Chawki silkworm rearer:** The first and second instar and sometimes up to 3rd instar silkworms is considered as chawki worms or young age silkworms. Chawki rearing centres are installed to overcome the problem where rearing is conducted upto 2nd or 3rd moult. According to the Central Silk Board Silk-worm Seed Regulations, 2010, the chawki silkworm rearer shall possess a matriculate pass certificate and a certificate course in sericulture from a recognized institution for having undergone training in chawki silkworm rearing for not less than three months in a sericulture institution under State or Central Silk Board or any other recognized institution. The chawki silkworm rearer shall rear a minimum quantity of 1.5 lakh disease free layings per annum from the third year of registration.

**6. Cocoon production:** Silkworm rearing for cocoon production is a good enterprise for income generation. North eastern region

of India is favourable for both mulberry and non-mulberry silkworm rearing. Though there is no organised market in this region still there is high demand of cocoon as silk weaving is a traditional activity in north-east India. Price of 1 kg mulberry cocoon is Rs 400-500; Price of 1 kg eri cut cocoon is Rs 700-900; Price of 1000 or 1 khonmuga reeling cocoon is Rs. 1800-6000. Investing very less capital large amount profit can be earned through this enterprise.

**7. Reeling and Spinning:** Reeling and spinning are two activities for production of raw silk from cocoons. Reeling is done in case of continuous silk filament. Mulberry, muga and tasar cocoons are reeled. Spinning is done in eri as eri cocoons are open mouth cocoons and filaments are discontinuous. Price of 1 kg mulberry, eri and muga raw silk is about Rs 3000-3500, Rs 2250-2800, Rs. 16500- 25000 respectively. There is always demand for quality silk. It is best suitable to the educated youth to produce quality silk through improved machineries and to provide employment to others.

**8. Twisting:** The raw silk is to be twisted before weaving. The process of twisting imparts spiral turns in to the raw silk. The twist holds together the fibres and also increases strength to the yarn. The twist of the yarn plays an important role in determining the character of the finished cloth. Though the initial investment is high to establish a twisting unit a substantial profit can be earned from twisting raw silk.

**9. Dyeing and printing:** The process of imparting colour to fibre, yarn or fabric is termed as dyeing. Printing also produces the colorful effect on the fabrics. Human being is always attracted to colourful objects. Dyeing and printing add value to the silk material. Now-a-days silk dyeing with natural dyes is gaining popularity not in the foreign market but also in the domestic market. These two industrial activities has scope to become a profitable enterprise not only in Assam but also in the adjoining states.

**10. Weaving:** Mahatma Gandhi during his visit to Assam said: “Assamese women weave dreams on their looms”. This is true for all the north eastern weavers. Weaving is an age-old

tradition in this region. Northeast India has over 220 ethnic groups and all of them have different motifs and designs of textiles. Silk weaving in handloom with ethnic design has high demand in the domestic as well as foreign market.

**10. Finished product/Fabric:** Silk fabric is known as the queen of all fabrics. Major portion of the silk produced in India is consumed by Indian people in different forms. Mekhela-chadar, saree and selwar-suits are some of the finished products of mulberry silk popular in Assam. Mekhela-chadar, saree, gamocha, tye, purse etc. can be prepared from muga silk whereas shawl, mekhela-chadar, socks can be prepared from eri silk. Muga and eri silk yarn and fabric have high demand in the international market. This is also a profit earning enterprise in the age of fashion.

**11. Value added product:** Various by products are generated during the production and processing of silk. By products are generated from host plant cultivation, silkworm rearing, seed production, processing of silk from cocoons and from weaving also. Compost, vermicompost and biogas production from leftover food, excess leaves, excreta, dead and diseased larva; mulberry fruit pickle, leaf pakoda, fruit candy, jelly, jam, wine; mulberry leaf tea, castor oil, tapioca tuber chips; excess leaves and stems as fodder for animals; cricket bat, hockey stick from mulberry stem; green pupa, dry pupa and pupal powder; biocrafts (developed out of cut / pierced cocoons) like garlands, photo frames, bouquets, wall hangings and other decorative items; various spun silk like matka, noil yarn; ghicha yarn and dupion silk (from double cocoons of mulberry) can be prepared and used.

## CONCLUSION:

From the discussion it may be inferred that there is ample scope to develop entrepreneurship in sericulture sector of Assam. Favourable climate and traditional knowledge on silkworm rearing are two advantages to establish sericulture entrepreneurship in the region. Further, presence of two spun silk mills in the state helps in conversion of eri cocoon, muga and mulberry silk waste into mill spun yarn.

