

# All about Sericulture

## SERICULTURE SECTOR

### 1. Introduction

Sericulture is the cultivation of silk through rearing of silkworm. It is an agro-based industry. It involves the raising of food plants for silkworm, rearing of silkworm for production of cocoons, reeling and spinning of cocoon for production of yarn etc. for value added benefits such as processing and weaving.

Sericulture also includes the practical aspects such as increasing productivity of land as well as labour, stabilization of cocoon production, improvement of silk yarn, fabric and generating profitable income for rural poor, SC, ST and OBC people. Silk is an animal protein fibre secreted (produced) by the silkworm larva for spinning of the cocoon. This cocoon provides a protective shell (shelter) for the soft and delicate caterpillar to pass the pupal stage inside it and metamorphose into an imago (moth). Silk yarn is obtained from the silk cocoons.

#### a) High employment potential

60 lakh persons are engaged in various sericulture activities in the country. It is estimated that Sericulture can generate employment @ 11 man days per kg of raw silk production (in on-farm and off-farm activities) throughout the year. This potential is *par-excellence* and no other industry generates this kind of employment, especially in rural areas, hence, sericulture is used as a tool for rural reconstruction.

#### b) Provides vibrancy to village economies

About 57 % of the gross value of silk fabrics flows back to the cocoon growers with share of income to different groups as under:-

- 56.8 % to cocoon grower
- 6.8% to the reeler
- 9.1% to the twister
- 10.7% to the weaver
- 16.6% to the trade

Thus, large chunk of income goes back to the villages from the cities.

### **c) Low Gestation, High Returns**

- Mulberry takes only six months to grow for commencement of silkworm rearing. Mulberry once planted will go on supporting silkworm rearing year after year for 15-20 years depending on inputs and management provided.
- Five crops can be taken in one year under tropical conditions.
- By adopting stipulated package of practices, a farmer can attain net income levels up to Rs.30000 per acre per annum

### **d) Women friendly Occupation**

Women constitute over 60 % of those employed in down-stream activities of sericulture in the country. This is possible because sericulture activities starting from mulberry garden management, leaf harvesting and silkworm rearing is more effectively taken up by the women folk. Even silk reeling industry including weaving is largely supported by them.

### **e) Ideal Programme for Weaker Sections of the Society**

- Sericulture can be practiced even with very low land holding.  $\frac{3}{4}$  acre of mulberry garden and silkworm rearing can support a family of three without hiring labour.
- Features such as low gestation, high returns make sericulture an ideal programme for weaker sections of the society.
- Vast tracts of forest based tasar food plants are available in the country, It can be judiciously used for rearing tasar silkworms which can offer supplementary gainful employment for the tribes.

### **f) Eco-friendly Activity**

- As a perennial crop with good foliage and root-spread, food plants contribute to soil conservation and provide green cover.
- Waste from silkworm rearing can be recycled as inputs to garden.
- Dried twigs and branches are used as fuel in place of firewood and therefore reduce the pressure on vegetation/forest.
- Being a labour intensive and predominantly agro-based activity, involvement of smoke-emitting machinery is minimal.

- Developmental programmes initiated for tasar/mulberry plantation are mainly in upland areas where un-used cultivable land is made productive.
- Mulberry can also be cultivated as intercrop with numerous plantations.
- Mulberry and tasar being a deep-rooted perennial plant can be raised in vacant lands, hill slopes and watershed areas.

#### **g) Satisfies Equity Concerns**

- Benefits of sectoral value-addition primarily accrue to rural households. As the end-product users are mostly from the higher economic groups, the money flows from high end groups to low end groups.
- Cases of landless families engaged in cocoon production using mulberry contracted from local farmers are common in some states.

## **2. Sericulture in Orissa**

Sericulture is a livelihood activity that goes round the year & provides remunerative income to the farmers. About 15,000 traditional families involving one lakh people actively practise sericulture in Orissa. It provides indirect employment to equal number of reelers, spinners & weavers. Out of the 4 types of silks viz. Mulberry, Tasar, Eri and Muga cultivated In India, three types namely Mulberry, Tasar and Eri culture is practiced in Orissa. These 4 types of silk differ in their food plant, duration of life cycle, quality of cocoon and yarn viz. size, weight, texture, colour, strength etc. At present with Govt. support tribals & few non-tribals under the BPL category are practicing sericulture & producing silk cocoons.

#### **a) Tasar:**

Tasar culture is very old and traditional in the State. There are more than 46,828 SC/ST families practicing Tasar culture in 14 hilly districts of the State, such as Mayurbhanj, Balasore, Keonjhar, Sundergarh, Deogarh, Sambalpur, Dhenkanal, Angul, Jajpur, Boudh, Sonapur, Kalahandi, Nuapada, Nawarangpur etc. Tribal farmers in these districts use nature grown tasar food plants in the forest for Tasar silkworm rearing. To boost tasar culture, Government of Orissa is taking steps for adding food plant plantation every year through MGNREGS.

**b) Eri:**

Though Ericulture is traditional, but much emphasis had not been given earlier for its growth. Ericulture exist in 14 Districts of Cuttack, Kendrapara, Jagatsinghpur, Nayagarh, Khurda, Dhenkanal, Angul, Sambalpur, Keonjhar, Kalahandi, Koraput, Rayagada, Gajapati, Phulbani & Sundargarh districts .

**c) Mulberry:**

Mulberry Sericulture is non-traditional to the State. Mulberry cultivation is done in 12 Districts such as Gajapati, Rayagada, Koraput, Phulbani, Kalahandi, Sonepur, Deogarh, Sambalpur, Nayagarh, Khurda, Keonjhar and Mayurbhanj etc.

**3. Infrastructure available**

**a) Field units-**The following infrastructures strengthen the sericulture sector. Total of 209 different types of field units function to cater the need of Sericulture activities. It includes 54 Govt. units, 133 cooperative units, 12 units of SERIFED and 12 units of Central Silk Board. The Govt. units include 1 State Tasar Research Farm, 16 Pilot Project Centers, 13 Mulberry Demonstration Farms, 2 Mulberry Grainages, 2 Eri Seed Stations, 20 Eri Centers. The cooperative units include 62 Tasar Rearing Cooperative Societies, 36 Mulberry Rearing Cooperative societies, 1 Eri Rearing Cooperative society, 33 Mulberry Extension Service Centers and 1 Mulberry Reeling unit. The Central Silk Board units include 1 Silkworm Seed Production Centre, 4 Basic Seed Multiplication and Training Centres, 2 Research Extension Centers, 2 P2 stations, 1 Regional Sericultural Research Station, 1 Regional Tasar Research Station and 1 Demonstration cum Training Centre.

**b) Existing plantation & Farmers-** In tasar sector the total plantation area up to 2010-11 is 10884 hectares where as in mulberry and eri, existing plantation area is 895 and 1281 acres respectively. In mulberry, tasar and eri 1137, 12500 and 2264 farmers respectively are covered under different schemes of the Govt. during the year 2010-11.

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