AARTHIK SWAVALAMBAN
Sericulture Project

Sericulture Project
for farmers

SERICULTURE RESEARCH & DEVELOPMENT COUNCIL
66, 3rd Floor Raj Hospital Opposite Pillor – 779, Gram Sabha Sewak Park,
Near Dwarka More Metro Station, New Delhi - 110059
Phone No.
info@sericulturecouncil.com, www.sericulturecouncil.com

Price Rs 500/-
Dear All,

I would like to introduce about the Sericulture Promotional Programme on behalf of Sericulture Research & Development Council. As some of us already know about the present scenario of sericulture in India that India held the 2nd position in the world raw silk production of approx. 26480 MT after China who is now held no. 1 rank in the production of raw silk with approx. 130000 MT. But the current Indian market demand of raw silk is approx. 50,000 MT, so still we are out of reach to supply the raw silk as per the current Indian market demand. So for fulfilling the current Indian market demand of raw silk we are importing raw silk of approx. 896.44 Cr per year.

So here, we are promoting the sericulture in India so that we can fill this huge gap of raw silk production as per the current Indian market demand and after that we can also be a big competitor for China in the world raw silk production in a very near future. So taking this step we can also make India proud in the world of raw silk production.

Thanks a lot................!!!
VISSION & MISSION

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 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 pupa stage inside it and metamorphose into an imago (moth). Silk yarn is obtained from the silkworm cocoons.

2. VISION

To provide necessary framework for advancing goals and prioritizing strategies for the development of sericulture & silk industry to become a major silk producing country in the world.

3. MISSION

• Promotion & development of sericulture & silk industry which is a growing industry because of its being an environment-friendly, an effective socioeconomic tool for employment generation in rural areas.

• Infrastructural and technical support for production of saplings of silkworm food plant and its plantation and silkworm seed.

• Promotion of appropriate & latest technology of sapling raising & plantation of silkworm food plants, silkworm seed, silkworm rearing, silk spinning and silk reeling.

• Facilitate marketing of sericulture produces at the optimum market price.

4. OBJECTIVES

The objective of this Promotional Program is to encourage farmers for the production of Mulberry silk by providing them technical assistance & approved training programs. Specifically, the Scheme aims to:

- To generate self-employment in rural areas and develop human resources for sericulture & silk industry.
- To promote extension & development, guidance and strengthening of support systems for sericulture & silk industry.
- To promote for value addition of the silk produces within the state for added livelihood and higher earnings to the people.
- Introduction and imparting latest technologies on sericulture.
- Support for optimal market linkage of sericulture produces.

5. SERICULTURE - COMMERCIALLY HIGHLY POTENTIAL

A) HIGH EMPLOYMENT GENERATION

80 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 may be used as a tool for rural reconstruction.

B) 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 more income.

C) WOMEN FRIENDLY OCCUPATION

Women constitute over 60 % of those employed in downstream 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 womenfolk. Even silk reeling industry including weaving is largely supported by them.

D) IDEAL PROGRAMME FOR WEAKER SECTIONS OF THE SOCIETY

• Sericulture can be practised even with very low land holding. ½ 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.
**E) 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 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 being a deep-rooted perennial plant can be raised in vacant lands, hill slopes and watershed areas.

**F) 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.

---

**SPECIES OF SILKWORMS**

There are four different species of moths of which yield different types of silk:

**MULBERRY SILK** is produced from the cocoons of the moth Bombyx mori. Within the species there are many varieties, mainly differentiated according to the number of generations produced annually under natural conditions. Then, hybrids of various kinds have also been developed. Multi valline varieties (laying eggs several times a year) have been widely propagated to push up yields. Mulberry is recommended as commercial crop worldwide.

**ERI** silkworm has two varieties – a wild one and a domesticated one bred on castor leaves. The filament is neither continuous nor uniform. Hence the moths are allowed to emerge before commencing reeling. A white or bright red silk is produced.

**TASAR** silkworms are wild. The Indian Tasar worm feeds on trees of Terminalia species and other minor host plants, while the Japanese and Chinese worms feed on oak and other allied species. Reeling can be done as with mulberry worms.

**MUGA** silkworm is found only in Assam. It feeds on two local species of shrubs – Machilus bombycina and Litsae polyantha, producing a strong, golden yellow thread.

---

Above chart shows that Mulberry is a commercial crop and it leads to total raw silk production, hence mulberry is recommended worldwide.
Egg: 10-12 Days
Hatching: 3-4 Days

1. Moult: 2½-3 Days
2. Moult: 3-4 Days
3. Moult: 4 Days
4. And final Moult: 6-8 Days

Ripe Silkworm
Spinning Silk Filament

Cocoon: 10-12 Days
Emergence from cocoon

Mating
Silkworm feeding on mulberry leaves

Ova: Egg is the first stage of a silkworm’s life cycle. After mating, each female moth lays around 300 to 400 eggs. Silkworm eggs are flat, ellipsoid or oval in shape and have a tiny pore known as micropyle at the anterior end. They are hard and measure 1.3 - 1.4 mm in length, 0.87 - 1.27 mm in width and around 0.6 mm in thickness. Each egg weighs around 0.5–0.6 mg. Colour varies in different breeds. Newly laid eggs are pale to dark yellow and the diapausing eggs turn to purplish gray often with green or pink tinge in 24 hours. The embryo develops inside the egg and transforms into larva which normally hatches in about 10 days from the day of laying.

Larva: The larva is the vegetative stage where growth takes place. The larva of Bombyx mori, commonly called a silkworm, is host specific to mulberry. During growth, the larva molts 4 times. The period between successive molts is called an instar. The silk worm, upon hatching, is about 1/8th of an inch and extremely hairy.

Young silkworms can only feed on tender mulberry leaves. However, during the growth phase they can eat tougher mulberry leaves as well. The larval stage lasts for about 27 days and the silkworm goes through five growth stages called instars, during this time. During the first molting, the silkworm sheds all its hair and gains a smooth skin.

Pupa: As the silkworm prepares to pupate, it spins a protective cocoon. About the size and colour of a cotton ball, the cocoon is constructed from one continuous strand of silk, perhaps 1.5 km long (nearly a mile). The silk cocoon serves as protection for the pupa. Cocoons are shades of white, cream and yellow depending on silkworm genetics. After a final molt inside the cocoon, the larva develops into the brown, chitin covered structure called the pupa. Metamorphic changes of the pupa result in an emerging moth.

If the silkworms are allowed to mature and break through the cocoon, the silk would be rendered useless for commercial purposes. So the encased insect is plunged into boiling water to kill the inhabitant and dissolve the glue holding the cocoon together. The end of the silk is then located and the cocoon unwound onto a spindle to be made into thread.

Cocoon: Cocoon is the stage in which the larva spins silk threads around it, to protect itself from its predators. The larva traps itself inside the cocoon in order to pupate. The colour of the cocoon varies, depending upon what the silkworm eats. It can range from white to golden yellow. The second molting occurs inside the cocoon, when the larva turns into a brown pupa. It takes about 2-3 weeks for the pupa to metamorphose into an adult moth.

Imago: The adult stage completes the life cycle of Bombyx mori. It is the reproductive stage where adults mate and females lay eggs. Moths are flightless and lack functional mouth parts, so are unable to consume the food/nutrition.

Once the adult moth comes out of its cocoon, its only purpose is to find a member of the opposite sex, and mate. Males are larger than females and more active. They flap their wings rapidly to attract the females. Within 24 hours of mating, the male moth dies, while the female lays abundant eggs, after which it dies as well. There on, a new silkworm life cycle begins.
MULBERRY PLANTATION

Mulberry is a fast growing deciduous woody perennial plant. It has a deep root system. The leaves are simple, alternate, stipulate, petiolate, entire or lobed. The number of leaves varies from one to five.

- Climatic requirements: Mulberry thrives under various climatic conditions ranging from temperate to tropical located north of the equator between 28°N and 55°N latitude. The ideal range of temperature is from 24 to 28°C. Mulberry grows well in places with an annual rainfall ranging from 600 to 2500 mm. In areas with low rainfall, growth is limited through moisture stress, resulting in low yields. On average, mulberry requires 3-40 m³/ha of water every ten days in case of loamy soils and 15 days in clayey soils. Atmospheric humidity in the range of 65-80 percent is ideal for mulberry growth. Sunshine is one of the important factors controlling growth and leaf quality. In the tropics, mulberry grows with a sunshine range of nine to 13 hours a day. Mulberry can be cultivated from sea level up to an elevation of 1000 m.
- Soil condition: Mulberry thrives well in soils that are flat, deep, fertile, well drained, loamy to clayey, and porous with good moisture holding capacity. The ideal range of soil pH is 6.2 to 6.8, the optimum being 6.5 to 6.8. Soil amendments may be used to correct the soil to obtain the required pH.

Support /Services for Mulberry Plantation Development:

Land preparation for Mulberry Cultivation: Mulberry falls under the category of perennial crops and once it is properly raised during the first year, it can come to full yielding capacity during the second year and lasts for over 15 years in the field without any significant deterioration in the yield of leaf. Usually flat lands are suitable for irrigated mulberry cultivation. If the slope is more than 15%, suitable land development measures such as contour bunding, bench terracing, etc. should be adopted.

Farm lands along the highways, in the vicinity of factories, area irrigated by raw sewage and untreated effluents, plots abetting other gardens with intensive pesticide usage, waterlogged areas and tobacco grown land are NOT suitable locations for mulberry cultivation.

Selection of Variety in Mulberry Cultivation: The criteria for selection of variety includes fertility of the land, water availability, region specificity, extent of garden and problematic soils. The yield potential of high yielding varieties can be best realised in high fertility soils. An improved selection namely K2, also referred to as M5 is a superior variety evolved by the Institute, which is a vigorous strain responding well to manuring and capable of giving about 25% more leaf yield. This variety thrives well both under dry as well as irrigated conditions. Quality wise also, it is superior to the local variety of mulberry and, therefore, could be used with great advantage in mulberry cultivation.

Planting material and Plantation in Mulberry Cultivation: Plantation in mulberry cultivation can be taken up both by cuttings and saplings. However, saplings are always better than cuttings as a planting material for quick and better establishment. Two cuttings / one sapling are planted at each spot in desired spacing. Cuttings are planted keeping one bud exposed while the saplings are planted in pits opened at the spot.

In mulberry cultivation, saplings of about 80-90 days old can be used for planting. While uprooting the saplings, maximum care should be taken to avoid damage to the root system.

Spacing of Plants in Mulberry Cultivation: In mulberry cultivation, spacing depends upon the soil conditions, slope, variety and convenience for inter-cultural operations.

Weeding and inter-cultivation in Mulberry Cultivation: During the initial stage of mulberry plant establishment in the field, weed growth should be kept to the minimum, so that the growing young plants are not smothered by the weeds. At least two weedings should be carried out during the first six months after planting of cuttings, once after two months of planting and again after an interval of 2 to 3 months. Special care should be taken to reduce the weed growth as much as possible in the first year of planting. Thereafter, the shade effect of the fully grown mulberry will tend to keep the weeds down.
Pruning: In order to get good leaf yield for 15-20 years, it is necessary to give a good and sturdy frame to the plant. After the planting, the saplings need to be cut at 10-15 cm above the ground level within a week. After the growth period of six months, the plants are to be cut at a height of 25 cm above the ground level keeping 3-4 strong branches.

Manuring and Fertilizers in Mulberry Cultivation: Application of a basal dose of organic manure like compost or cattle manure is necessary for successful establishment of the garden. Thereafter, the young growing plants should be assisted to put forth vigorous and maximum growth through periodical fertilizer applications.

Irrigation/Water supply in Mulberry Cultivation: Among the various inputs, irrigation ranks high in giving quick and good results. Regular irrigation at an interval of 8-10 days is ideal. Usually, 1.5 to 2 acre inch of water per irrigation is enough. It may be noted that there is only one irrigation channel for every two rows of mulberry plants. This helps in both saving and more effective use of the irrigation water. In case of water scarcity, drip irrigation can also be adopted for better production.

Harvesting of Mulberry leaves: Picking of leaves should be carried out in time in mulberry cultivation, that is to say, when the leaves are at the correct stage of maturity for harvest. Otherwise, part of the leaves will become over mature coarse and suffer in quality from the point of view of nutritive value for the silkworms. Also part of the leaves may turn yellow, shed and be lost. Therefore, timely harvest, as the leaves reach the required stage of maturity, will lead to fuller harvest of the available leaves without wastage, and realization of maximum yield.

Yield in Mulberry Cultivation: Normally the expected annual yield is 40-50 t of leaves per acre. In shoot harvest method, harvesting can be done at an interval of 70 days (5 harvests). In case of leaf harvest method, first harvest is taken 70 days after 1st pruning and 2nd and 3rd harvest (coinciding with 2nd bottom pruning) at an interval of 55 days. The fourth harvest is taken 70 days after the 3rd harvest and 5th and 6th at an interval of 55 days.

Silkworm

The silkworm is the larva or caterpillar of a moth. The moth is important because it makes the silk. It is an economically important insect. Silkworms eat mulberry leaves. Mulberry silkworms can be categories into different but connected groups or types.

Silkworm Rearing

The silkworm (Bombyx mori) is the chief source for production of fabulous mulberry silk in sericulture industry. Throughout its rearing period it has to be looked after carefully and nourished with good quality mulberry leaves. Provision for optimum environmental conditions and protection from pests and diseases are the other essential requirements. Depending on the number of generations per year, the silkworms are classified into univoltine, bivoltine or multivoltine races. Univoltine and bivoltine races are specific for temperate areas whereas multivoltines are for tropical areas. Silkworm rearing involves both technical and commercial aspects. In tropical areas, where mulberry grows luxuriantly throughout the year, 5-6 rearings are conducted in a year while in temperate/sub-tropical areas it is common to raise one/two crops. From hatching to its full grown stage, the silk worms pass through five instars and the worms up to stage three are called young age worms or Chawki. As they are susceptible to infections and vulnerable to adverse weather conditions, special care is required for rearing of chawki.

The various stages involved in chawki rearing are indicated below:

1. Obtain quality eggs: Disease free layings (DFLs) to be used.
2. Incubation & Brushing: Ideal storage conditions of 25 to 26o C. temperature and 85% RH. 16 hours of light and 8 hours of darkness ensures uniform hatching (normally between 9-12 days from egg laying). Brush newly hatched larvae on to the rearing beds and sprinkle freshly chopped tender leaves of 0.5 to 1 cm.
3. Feed the right quality leaf: Highly nutritious leaves in adequate quantities at suitable intervals of time to be fed. Top 3-4 full grown leaves immediately below the growing buds are suitable.
4. Provide right environment: 26-28o C and 80-85% RH
5. Feed management: Fresh chopped leaves are spread thinly on the dry beds.
6. Keeping the beds clean.
7. Care during moulting: Provide with optimum temperature and humidity conditions and also necessary spacing and leaf feed. There has to be low to very low or no feeding during moulting and maintain a temperature of 24-25o C and RH of 65-
Total area of rearing house : 1000

1. Rearing capacity : 250 DfIs Per Batch (Approx)
2. Size : 50 ft X 20 ft and 5 ft Verandah in front
3. Plinth height : 1.5 ft RCC construction
4. Wall : Bamboo with mud plastering / plank (wooden)
5. Post : wooden
6. Roof : C.I. Sheet
7. No. of doors : 3 Nos. (6ft X 3.5 ft wooden)
8. Direction : North & South Orientation

70%: The worms will attain maximum growth in minimum time and will take 3 to 3 ½ days in the first instar and 2 ½ to 3 days in the second instar to go into moult. The third instar is crucial as this is the intermediary stage between the chawki and late age worms.

Rearing of Late age Worms:- begins from third instar. These worms are voracious feeders. The various stages for rearing are indicated below:

- Ensure disinfection two days before brushing of worms. The rearing room and equipments should be disinfected.
- Provide sufficient quantity of leaf. The late age stage consumes 95% of the total feed. Mulberry leaves to be harvested with optimum maturity with relatively low moisture, high proteins and fibers with less carbohydrate content.
- Ensure good environment: Maintain 24-25°C temperature and 70-75% humidity. The space requirement for 100 DFLs of multi-voltine races is 100 – 200 sq. ft and 200 – 400 sq. ft for 4th and 5th instar, respectively. For bi-voltine races, it is 115 – 225 sq. ft and 225 – 550 sq. ft space for 4th and 5th instar, respectively.
- Ensure hygienic conditions.
- Protect from natural enemies like Uzi fly.
- Mounting of ripe worms: Ripe worms to be picked on completion of 6-7 days after passing 4th moult and provide 26-27°C and 55-60% RH to ripe worms.
- Harvesting of Cocoons: Suitable mountages are used for mounting optimum density of worms (40-45 worms/sq.ft.). Mountages with worms are not to be exposed to direct sun light and humid conditions are to be avoided. Cocoons are harvested on 5th to 6th day after mounting which ensures complete development of pupae. The qualities of good cocoons include uniform size and shape, rich silk content, less floss, more shell weight, uniform shape, uniform build of cocoons.
- Cocoon Yield: The average yield is 40-45 kg. (CB) and 45-50 kg (BV) from 100 DFLs.
- The entire process from egg hatching to cocoon in silk worm rearing takes about 26-27 days.
- Construction of Rearing Shelter for Silkworms: Mulberry silkworm rearing, being completely domesticated, demands specified environmental conditions like optimum temperature (24-28°C) and relative humidity (70-85%). It is therefore necessary to evolve measures for economic cooling through selection of proper material for wall and roof fabrication, orientation of building, using the right construction method / design, etc. Further, enough space must be available to carry out leaf preservation, chawki rearing, late age rearing and moulting and also its effective cleaning and disinfection. The size of the silkworm rearing house depends upon the quantum and type of rearing. Shelf rearing requires minimum space and is most common in India.
Sericulture Research & Development Council will identify and give charge to work on state level to one of the NGO or any other eligible group selected by Sericulture Research & Development Council. Benefits derived from State Resource Agency to the farmers are as follows:

I. State Resource Agency will assist SRDC to identify the District and Block Resource Agencies in their state to complete farmers' networking.

II. State Resource Agency will monitor and maintain the work with District and Block Resource Agencies for pre/post-cocon activities as planned by SRDC.

III. Provide guidance and assistance to identify and motivate farmers/group farmers (SHG) in each village to the district and block resource agencies.

IV. Organizing proper training on sericulture activities like planting mulberry trees, equipment utilization and sanitation, establishment of chawki rearing house, silkworm seed supply.

V. Educating “Resham Sathies” and “Resham Doots” to network more farmers through awareness programme in silk farming in order to development of rural industry.

VI. To report complete details of the implementation programme and progress report of the state to the Sericulture Research & Development Council.

**POWER LOOM UNIT (SPINNING AND WEAVING):**

An Automatic Power loom unit will be established in every state subject to availability of raw silk production. Sericulture Research & Development Council will provide financial cum technical assistance.

**DISTRICT RESOURCE AGENCY**

Benefits derived from District Resource Agency to the Farmers are as follows:

I. To identify and motivate farmer/group farmers (SHG) in each village of the district with the help of Block Resource Agencies.

II. To arrange training program on sericulture activities for farmers.

III. Upgrade farmers’ knowledge about technical upgradation in
   - Mulberry plantation and management
   - Establishment and maintenance of chawki rearing house

IV. Assistance in cocoon harvesting and management.

V. Collection of cocoons from door-step of farmers and carried to Reeling Unit.

VI. Facilitate in receiving payment for cocoon sold by farmers.

**ROLES AND RESPONSIBILITIES**

DRA will provide technical assistance and consulting to initiate the sericulture activity in their Blocks (mulberry plantation and establishment of chawki rearing house) for Sericulture Promotional Program through BRAs, Resham Resham.

DRA will organize/monitor Farmer’s Training, mulberry plantation and establishment of chawki rearing house program in the coordination of BRAs.

DRA will provide technical assistance and consulting in Sericulture Farmers SHG formation to Block Resource Agencies (BRAs) of all blocks in district allotted.

DRA is mandatorily required to monitor the work of all BRAs (i.e. sericulture farmers networking, Training, Plantation, BRAs duties, etc.).

**AUTOMATIC REELING UNIT**

An Automatic Reeling Unit will be established in every district subject to availability of cocoon production. Sericulture Research & Development Council will provide financial cum technical assistance.
Role of BRA:

BRA must identify pool of resource persons. All resource persons will be called and identified as “Resham Sathi” and the team leader of such all resource persons group will be called and identified as “Resham Mitra”. These resource persons can be from sericulture, other agricultural activities, academic field, experienced BRAs will provide technical assistance and consulting to initiate the sericulture activity in their Block (mulberry plantation and establishment of chawki rearing house) for Sericulture Promotional Program through Resham Sathi & Resham Mitra.

1. BRA should form sericulture farmer SHGs (i.e. networking of farmer’s) In the Block.
2. BRA will monitor and supervise all the farmer’s SHG formation process.
3. BRA will make sure that Application & Registration is properly submitted to SRDC.
4. After registration, farmers will be provided proper training about sericulture activity plantation, garden management & sericulture farming, Establishment of Chawki Rearing House etc. By Block Resource Agency.
1. Gaudiness about land soil quality for Seri Farmers
2. Preparation of land for mulberry gardens.
3. To establish the farmers Rearing houses.
4. Rearing of early age silkworms.
5. Quality Late Age silkworm supply to farmers at door steps.
6. Cocoon quality control.

Role of “Resham Sathi”

To encourage Door to Door Service Agents to carry out the Disinfection of Rearing House, Mulberry Garden & supply of inputs to the Sericulture Farmers at their door steps.
**SERICULTURE – Moving To Golden Path**

**AARTHIK SWAVALAMBAN – Pilot Project**

How a farmer can start sericulture activity ..............through the Pilot Project

**Offline and online registration** - An opportunity to get registered and be a commercial part of our Council and proper training for sericulture activity will be provided to the farmers.

**Benefits of Registration**

1. **Farmer ID Card** - Every Registered farmer will be issued an Identity Card so in future the card will enable farmer to sell cocoon through Digital Cashless Trading

2. **Training** – After registration, farmers will be provided proper training for Sericulture Activities i.e. Mulberry Plantation, Garden Maintenance, Investment (Expenses) in farming of one Acre land and Revenue derived.

3. **Assistance for Chawki Rearing House** – Farmers will get full support with technical guidance and assistance to establish chawki rearing house.

4. **Market Linkage** – Transport facility will be provided by SRDC to collect Cocoons from door-step of farmers. Also make available Silkworm Seed (DFLs) at door-step of farmers.

After training farmers decide to Start Sericulture Farming Activity:-

The expected Expenses for 1 acre Farming is Rs.15,000/- (Rs. Fifteen Thousand Only). (Farmer may himself arrange such services OR he may ask to SRDC by making payment for such services.

Support and Services provided by SRDC

1. **Soil and Water Testing** – Farmers will get scientific Soil and Water testing facility.
2. **Stem Supply** – Every registered farmer will get required mulberry stems to plant on one acre of land.
3. **Silkworm Seed Supply** – SRDC will make available quality silkworm seed (DFLs) to every registered farmer.
4. **Crop Insurance** – Crop insurance protects from natural disasters which affect crop yield and revenues along with other privileges.

- **Farmers Loan** – SRDC will facilitate to get “AARTHIK SWAVALAMBAN – SERICULTURE LOAN” up to Rs. 1,35,000/- (Rs. One lakh and thirty five thousand only) to each farmer for establishment of chawki rearing house (traditional or modern method can be opted according to financial budget).

- If farmer choose to avail services by SRDC, he can make the above payment of Rs. 15,000/- by Demand Draft (DD) only, in favor of Sericulture Research & Development Council, payable at New Delhi.

**REGISTRATION PROCESS**

The farmers will be online registered with SRDC. Farmers will get assistance from the Block Resource Agency to get registered online. Block Resource Agency will collect all the information from the interested farmers. The farmers will be given a registration number along with acknowledgement receipt and identity card. He will be able to use this registration number as reference ID. No. in future also. All the information about registered farmers of SRDC will be available on SRDC website also. (Farmer may himself arrange such services OR he may ask to SRDC by making payment for such services)
TRAINING

Every registered farmer will be provided proper training for pursuing Sericulture Activities in Four Steps. Every step of trainig program will have 3 days:

Step 1 –
• Introductory Mulberry Sericulture Activity
• Mulberry Plantation and Garden Maintenance.

Step 2 –
• Establishment and Maintenance of Chawki Rearing House

Step 3 –
• Silkworm Rearing – Requirement and Management
• Cocoon harvesting, sorting, drying and preservation & assessment

Step 4 –
• Market Linkage: Transportation of Cocoons, Sales Process and Selling Price of Cocoons, mode of payment through Id-cum-ATM card (i.e. cash crop payment).

SOIL AND WATER TESTING

Understanding and maintaining the chemical, physical and biological ‘health’ of Soil will provide the foundation for increased sustainable productivity. Testing the chemical make-up of irrigation and stock water is important to avoid potential crop-production, soil-health or farm-livestock problems. Such testing will help to select category/ quality of stem plantation. The farmers will be provided with a testing certificate also.

STEM SUPPLY

Maintaining a mulberry garden is the primary requirement for sericulture activity. For that required Mulberry Stems will be provided to the farmers to be planted on one acre of land (per farmer). Silkworms feed on mulberry leaves. Hence the rearing of silkworms involves cultivation of mulberry trees, which provide a regular supply of leaves.

SILKWORM SEED SUPPLY

SRDC will facilitate to make available quality silkworm seeds (DFLs) to farmers through its own established Commercial Silkworm Seed Bank at door-step of every farmer. Timely supply of high yielding hybrid Silkworm Seeds can only sustain Sericulture as comparative cash crop in the country. Silkworm Seed is the sheet anchor of Sericulture Industry. A sound Silkworm Seed organization governs the production and productivity of silk.

ESTABLISHING CHAWKI REARING HOUSES

Farmers will get full support and guidance to establish the chawki rearing house. Chawki rearing refers to rearing of young silkworms, from egg hatching up to the second moult stage, under controlled micro climate. The process of chawki rearing may be compared to nursery raising in plantation crops. The purpose of chawki rearing is to grow quality silkworms under disease free environment, to reduce worm rearing duration, cost and to improve cocoon productivity at farmers’ level. For establishment of Chawki Rearing House traditional and modern method can be adopted according to financial budget of farmer.
CROP INSURANCE

This contribution by the farmer will include Crop Insurance. In India, the agricultural production is depending on the nature. The Indian farmers have to suffer a huge loss of crop yields and revenues during natural disasters such as flood, drought or earthquake. Insurance is the best way to protect the farmers from such damages. Beneficiaries covered under different pre and post cocoon components of sericulture shall be covered under insurance cover.

COCCOON TRANSPORTATION

SRDC will provide transportation facility to collect cocoons from door-step of farmers. A complete facility to carriage cocoons produced by our farmers to our own established reeling units at optimal market price is desirable. Characteristics of Cocoons production from different farming areas and their transportation have considerable impact in cocoon technological traits as the farming areas vary among ecological and geographical considerations.

MARKET LINKAGE

SRDC Designs Sericulture Marketing for farmers need and support. New marketing links between Seri-business……..

When farmer requires silkworm seeds, they will ask to nearby Block Seed Bank for supply of seeds at his door-step, similarly Cocoons will be collected from door-step of farmer. The weight of sold Cocoons will be recorded in an electronic device and a message will be reflected in farmer's Mobile about weight and price of sold Cocoons. Now farmer can receive payment by using his Sericulture digital Kisan card and then payment will be transfer to their bank account.

Improvement of marketing linkages for both farm produce and inputs necessitates a strong financial support backed up by appropriate policy and framework along with effective administrative and marketing support.

FARMERS LOAN

To start sericulture activity some initial finance is required. For the same purpose SRDC will facilitate “AARThIK SWAVALAMBAN – SERICULTURE LOAN” to support the farmers by arranging Loan up to Rs. 1, 35,000/- (Rs. one lakh and thirty five thousand only). Loan for sericulture helps provide hassle-free and adequate credit for establishment and support of mulberry farms and nurseries, mulberry cultivation, purchase of eggs (DFLs), purchase of equipments, establishment of chowki rearing house, etc. (Traditional or Modern method can be opted according to financial budget).