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**DEPARTMENT OF ZOOLOGY**

*Certificate of Attendance*

Shri./Miss. \_\_\_\_\_

of class B.Sc. Part II Roll No. \_\_\_\_\_ Examination Seat No. \_\_\_\_\_ has  
attended the Study Visit to Sericulture Center, Wai on 02th  
February 2019.

Teacher In-Charge

Head,  
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## **SERICULTURE REPORT 2018-2019**

# ***INTRODUCTION***

**Sericulture of silk forming is the rearing of silkworms for the production of the silk. Although there are several commercial species of silkworms. *Bombyx mori* is the most widely used and intensively studied silkworms. Sericulture has become one of the most important cottage industries in a number of countries like china, Japan, India, Korea, Brazil, Italy and France.**

**Today, china and India are the two main procurer's together silkworms larvae are feed by mulberry leaves and after the fourth moult climb a twinge placed near them and spin their silken cocoons. The process is achieved by the worm through a dense fluid secreted from its structural glands resulting in their fiber in the cocoon. The silk is a continuous filaments fiber consisting of fibroin protein secreted from two salivary glands in the head of each larva and a gum called sericin which cements the two filaments together.**

**Thee sericin is removed by placing the cocoons in hot water, which frees the silk filaments and readies them for recalling. This is known as the degumming process. The immersion in hot water also kills the silkworm pupae.**

# ***OBJECTIVES***

- 1) Sericulture provides suitable silk fiber to manufacture the various kind of gametes**
- 2) Sericulture is an excellent cottage industry improving the economic status along with the maintenance of environment equilibrium in rural areas.**
- 3) Sericulture industry requires low capital investment it can be done with regular farming as a cottage industry.**
- 4) Sericulture industry provides employment for men and women from rural area of different age category.**

# ***STUDY SITE***

To study sericulture we have visited District Sericulture Centre wai on January 2019. In this centre the government officials have provided us various information regarding the cultivation of mulberry rearing techniques of silk moth and ideal condition required for the better maintenance of larvae and production of good quality cocoon. Many farmers from satara district. Koregoan taluka have taken the initiative and involved in silk production along with their traditional farming.

# **CULTIVATION**

**Mulberry is a hardy plant capable of thriving under a variety of agro climatic conditions. Plants cultivated by “patlamethod” (2×3) ×5 feet and plant population is 100%. It also gives 8metric tons cow dungs manure.**

**Only cultivates CSB Certified Seeds for planting at the same time, it’s also sensitive responding extremely well to optimum agriculture inputs but shows partially no growth. When plant nutrients and moisture begin to operate as limiting factors. This is evident from the fact the poor rainfall conditions of 25-30 (625-750) prevailing in south India the current leaf yield is of the order of only 300-3500 kg per hectore whereas under assured irrigation and appropriate fertilizer Applica nearly ten times. Further mulberry under south Indian conditions, unlike in temperature regions like Japan, Korea, and USSR gives continuous growth almost through the year because of optimum temperature condition and good sunshine available.**

# **SOIL & CLIMATIC CONDITIONS**

**Mulberry can grow practically on any type of land except on very steep lands. Good growths however are obtained when it’s raised on either flat land. Mulberry grows in a wide range of soil, but best growth obtained in 100mg. The mulberry plant can tolerate slightly acidic conditions in the soil with p<sup>h</sup> below 5 necessary corrective measure through application of dolomite or lime should be adopted. In case of alkaline soils applications of gypsum should be restored to for correction of the soil mulberry alkalinity since mulberry is a deep rooted plant, the soil should be sufficiently deep up to about two feet in depth. In repect of elevation mulberry thievers well up to about 4000feet above growth will be retarded because of the colder.**

# **REARING**

**The silkworm larvae after 12 to 13 days will be segregated into various age groups. The larvae at this stage change body color at this stage and do not take any food those worms will be separated and put into a plastic tray covered with papers and wire mesh net. The light yellow colored larvae after taking required amount of feed (after approximately 10-12 days of initiation of larval stage) are ready for cocoon stage are placed on the net. Before placing the cocoons the tray is washed with bleaching powder to protect the worms from infection the cocoons. The cocoon stage is arrived in 5 days.**

# **ECONOMY**

**Sericulture provides a continuous income throughout the year. An economic analysis of mulberry sericulture farmers was studied, cost and return structure from cross-breed (pure- Mysore ×C<sub>5</sub>R<sub>2</sub>) silkworm rearing was estimated. The study has shown that net returns from one cores of mulberry worked out to Rs 52,206=00/year. The cost benefit ratio of sericulture was worked out to be significantly higher (1:1:94). Detailed study of the economics revealed that the major economics factor contributing for the total cost in structure was labor which was 32.52% for silkworm rearing and 19.95% for mulberry production. Another important they were cost of equipment for silkworm rearing which about 11.27%.**

**The possibility of obtaining 1,600kg of biotic cocoons from rearing 4000 laying and by producing 30,000 kg of leaves per hectore. The cost of leaf and cocoon production and net and Rs 26, 80000 respectively per hectore by using improved technique.**

# **GOVERNMENT FACILITIES**

**A complete system from egg to silk production at the village level has been developed and popularized in Maharashtra and Karnataka. Advisory services have also been provided to 400 farmers in Manali district through the government of Himachal Pradesh for improving their income. More than 250 families with 163 mulberry plantations received technical guidance and marketing support in collaboration with the directorate of sericulture. Government of Maharashtra whose earnings have increased to 1.20 lakh per year from Rs 4,000 to 26,000 from tassar silk and Rs 2500 to Rs 3.5 lakhs from sericulture while generating over 2.7 lakh person days of employment per year 80 landless families in Thane , Pune , Gadchiroli and Bhandardara districts of Maharashtra are earning in the range of Rs 6000 to 30,000 per year through integrated activities such as tassar silkworm rearing , reeling of tassar , cocoons processing of raw silk and weaving of silk fabrics.**

# ***THE STAGES OF PRODUCTION***

- 1) The silk moth lays thousands of eggs.**
- 2) The silk moth eggs hatch and the larvae feed on the mulberry larvae.**
- 3) First it waves a net to hold itself.**
- 4) Next it swings its head from side to side in form of number '8'.**
- 5) The silk solidifies when it comes in contact with to air.**
- 6) The silkworms spin approximately 1 miles of filament and completely enclose itself a cocoon in about two or three days but due to quality restrictions the amount of usable silk in each cocoon is small. As a result 5500 silkworm are required to produce 1kg of silk.**
- 7) The silk is obtained from the undamaged cocoons by brushing the cocoon. To find the outside end of filament**
- 8) The silk filaments are then wound on a reel. One cocoon contains approximately 1,000 yards of silk filament. The silk at thios stage is known as row silk. One thread consists of up to 48 individual silk filaments.**







**HEAD,  
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