

Sericulture

Ent-202

Applied Entomology

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Sericulture

- Act of rearing silk moth for silk production
- Silk produced by no. of insect species of family Bombycidae
- But *Bombyx mori* – silk inferior quality



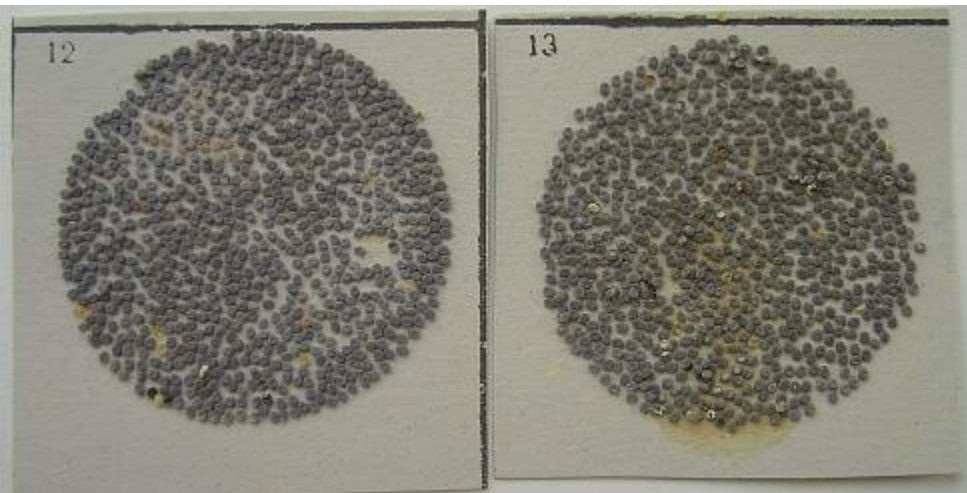
Bombyx mori

- Univoltine – one generation per year
- Feeds on mulberry leaves
- Insect require – low temperature – little moisture



Silk Seed

- Eggs of silkworm – silk seed
- Available from Sericulture Inspector in each district
- Contains – 20,000 to 22,000 eggs
- For rearing: 1 oz of seed require 15 full grown mulberry trees
- Incubation of eggs should be started 15 days before sprouting of trees



Rearing of Silkworm

- Eggs incubate in an incubator or in clean room at 25 °C
- Eggs should be placed on white paper
- Eggs should be covered for safety
- Maintain humidity – 2to3 buckets of water inside the room
- Hatching will occur in 10-12 days – will continue 2-3 days
- Larvae should not be touched with hands
- Caterpillar – 5 molting
- In the beginning of every molt they stop feeding – keep 1/3 of body raise up
- Same age larvae should kept in each tray



Requirement for larvae from 1 oz eggs

Stages of Larvae	Space required	No. of days	Mulberry leaves
1 st	24 sq. ft	3 d	5 kg
2 nd	40 sq. ft	5 d	10 kg
3 rd	80 sq. ft	7 d	15 kg
4 th	250 sq. ft	9 d	110 kg
5 th	300-500 sq. ft	9-11 d	400 kg



- Sanitation is important
- Refused leaves and excreta must be removed
- Trays should be cleaned
- They pupate under shade – 5th instar larvae should be provided small boxes of cards
- One caterpillar can spin 400-500 feet long thread
- Adult will come out from cocoon by making hole
- To save cocoon – pupae should be killed



- The process of killing cocoon pupa called **STIFLING**
- It is done by 2 ways

By sun heat

- Expose cocoon for 2-3 days to sun – cover with black cloth – pupa will die

By steam

- Pass steam over the cocoon to kill pupa



Diseases of Silkworm

Pebrine disease

- Infected moth lay infected eggs – larvae don't reach to maturity
- Black spot on the body – secretion of blood from body observed

Muscardine

- Growth of fungus – larvae become sullugish

Flacherie

- Fatal disease – prominent after 4th molting – larvae stop spinning – sluggish – die off

THANK YOU