



Cocoon Brushing

Dr. Mahesha H B
Professor and Head
Department of Sericulture
Yuvaraja's College
University of Mysore, Mysuru, India.

Brushing

After the cocoons are cooked, have to be brushed for removing the surface floss layer of cocoons.

The floss layer of the cocoon is entangled, coarse, does not yield silk for reeling and obstructs reeling of the clear bave and so its removal ensures high standards in raw silk.

The floss layer is removed by a process known as brushing.

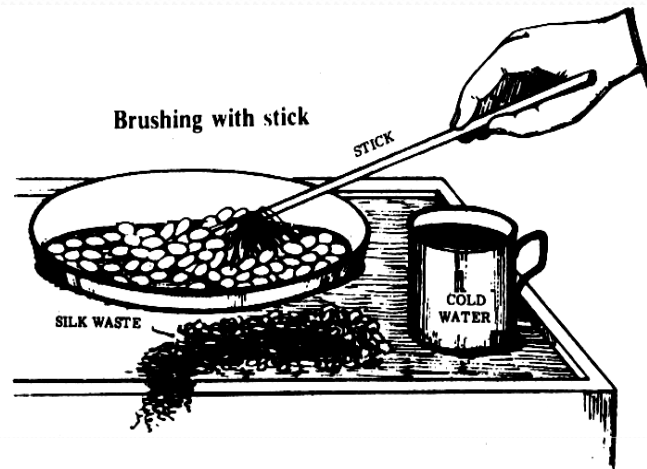
Methods Of Brushing

- **Stick Method**
- Hand Brush Method
- **Mechanical Method**

Hand Brush Method is common in all most all reeling establishments.

However, in case of fully automatic reeling machine with centralized cocoon cooking machine, Mechanical method of cocoon brushing is attached.

Stick Brushing



1. A single flexible, thin, soft stick is frequently used. The operative holds one end of the stick and with the other end carefully removes the floss from the cooked cocoons in the basin by dextrously working the stick in a series of figure eight (8) among the cocoons in the basin, in such a way that the stick comes lightly in contact with the surface of the cocoons and catches and draws off the flossy waste.

Stick Brushing continued

2. When sufficient quantity of floss has been taken off, it is lifted.
3. Then the operative takes hold of the lump and lowers it towards the cocoons, gathering, then lifted up to about 25-30 cm above the cocoons and the released baves from the cocoons drawn up along with the lump waste are caught and separated from the waste at the point of contact of the baves and the lump of floss waste.
4. The waste is kept aside for further cleaning and drying.
5. The cocoons with their released reelable baves are transferred to the reeling.

Stick Brushing continued

Sometimes instead of a single piece of stick a prong made of two pieces of sticks or twigs is used.

1. The operative gently taps the surface of the cocoons repeatedly with the prong in several parts of the cocoon group in the basin and every time the prong is lifted, filaments from the floss layer are drawn up.
2. These are gathered in the hand of the operative till sufficient quantity has been collected. Then in the manner already described above, the rest of the floss is removed.

Hand Brush

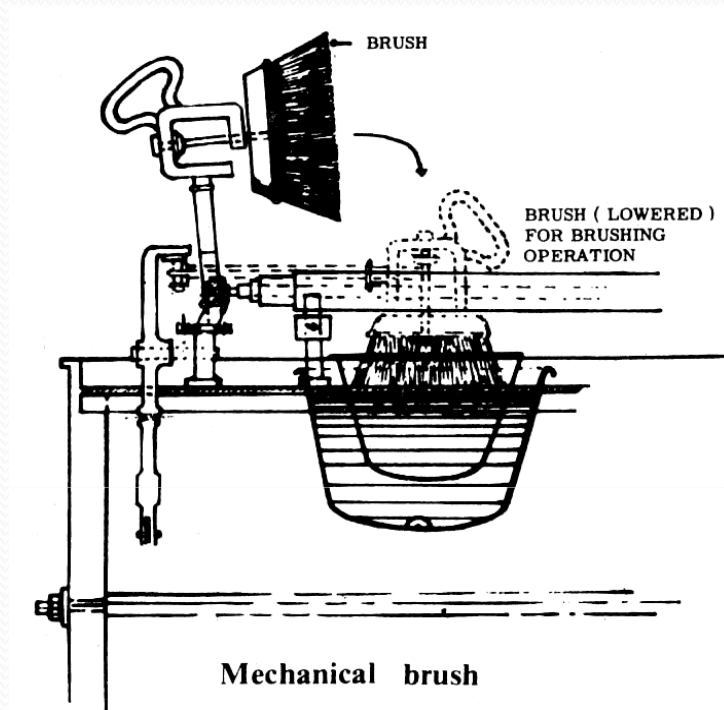
This brush is generally made of fairly thick and long fibres tied like a broom. The brush is about 15-20 cm long and has a flat, circular brushing surface about 6-8 cm in diameter. The softened floss of the cooked cocoons in the basin is gently brushed by circular movements of the brush lightly touching the surface of the cocoons. The brush is then lifted up and the floss waste removed in the manner described above. As the brushing surface is large with hundreds of bristles, brushing of floss is done quickly and more efficiently. Due to the flexibility of the bristles there is no risk of injuring the bave or rupturing the pupae.



Hand-brush

Mechanical Brushing

1. After boiling the cocoons, the automatic brush is lowered into the basin.
2. Immediately the brush commences to make fairly brisk clockwise and anticlockwise rotary movements with three-quarters of a turn in each direction, alternately.
3. After a definite number of rotary movements (generally 20 to 24) the brush is lifted out of the basin either by the cooking operative or automatically.



Precautions

- (i) Cocoons should be thoroughly well sorted and should be of uniform size and build.
- (ii) Only one layer of cocoons should be on the surface of the water and the water level should be constant.
- (iii) The steam supply should be stopped when the brush is lowered into the basin to avoid over-cooking of cocoons during brushing.
- (iv) The brush should always be kept clean and free.
- (v) When unyielding cocoons are returned from the reeling basin they should not be cooked again with fresh cocoons.



**Acknowledgements
to**

SERICULTURE MANUAL 3, FAO PUBLICATIONS