


SILK

Silk fibre is obtained from the cocoon of the silk moth. The rearing of silkworms to obtain silk is termed as sericulture. The silk fibres so obtained are weaved to make silk cloth.



A SILK SAREE



Tassar silk, mooga silk, kosa silk are the most commonly known silk varieties. The most common silk among all is the mulberry silk which is soft, lustrous, and elastic and can be dyed in to beautiful colours.



Mulberry Leaf




SilkWorm



Life cycle of silkworm-

The female silk moth lays eggs. The larvae also known as caterpillar or silkworm hatches out from the egg and grows in size. As soon as the caterpillar gets ready to develop into pupa, it first weaves a net to hold itself and swings its head from side to side in the form of the figure of eight (8).



During these movements the caterpillar secretes fibre made of a protein that hardens on exposure to air and becomes silk fibre. The caterpillar soon covers itself completely by a covering of silk fibres known as cocoon. The further development of the moth continues inside the cocoon. Silk fibres are used for weaving silk cloth.




Life history of silk worm




Processing of cocoon to silk-

Step I: The first step towards obtaining silk is rearing of silkworms done when mulberry trees bear a fresh crop of leaves.

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- **The hundreds of eggs laid by female silk moth are stored carefully on strips of cloth or paper and are then sold to silkworm farmers where the eggs are kept under hygienic and suitable conditions of temperature and humidity for their proper growth.**

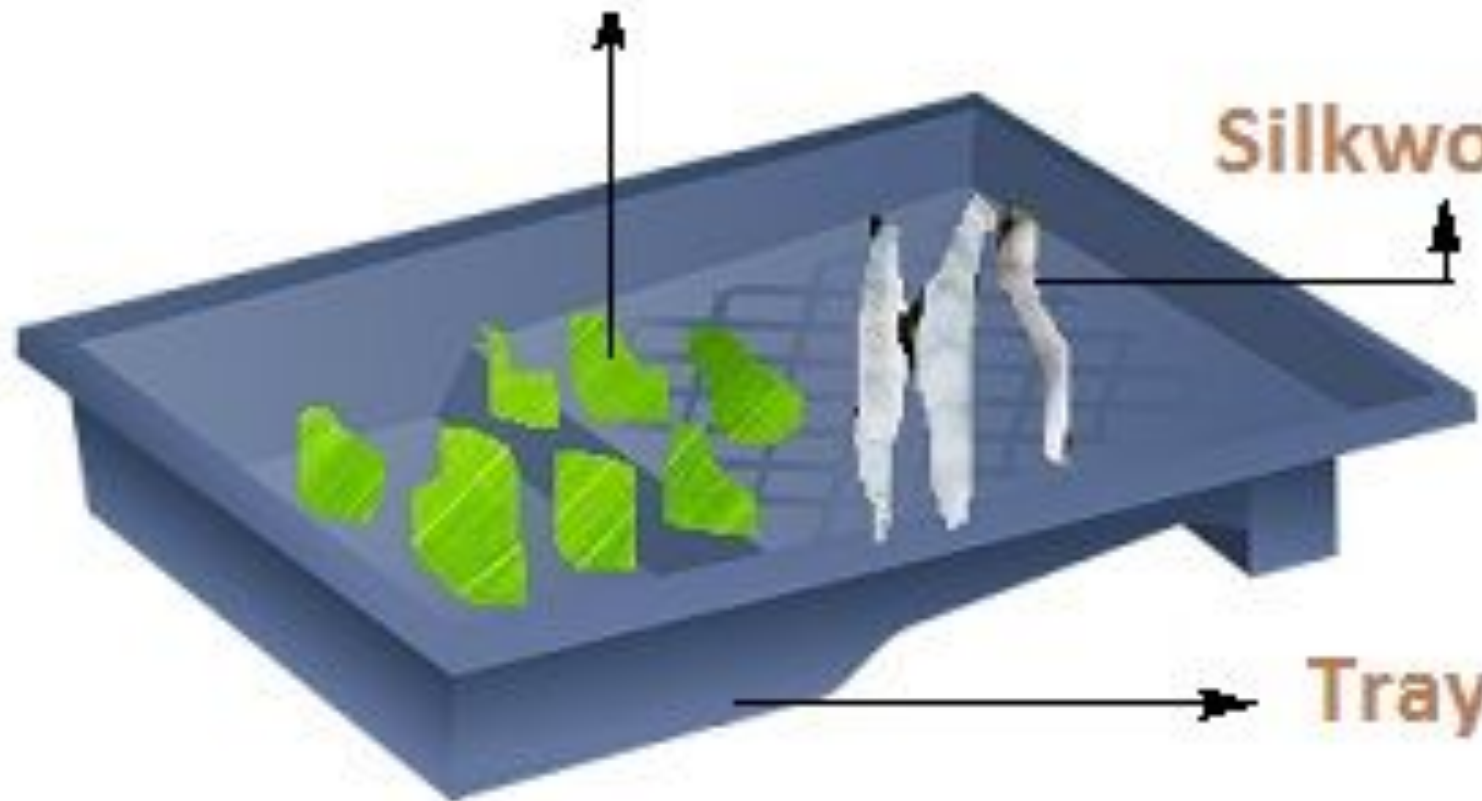



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- **They are then warmed to a suitable temperature. This enables the larvae to hatch from eggs. The larvae also known as caterpillar or silkworms are kept in bamboo trays and are served with freshly chopped mulberry leaves. They eat day and night and increase a lot in size.**

Leaves


Silkworm

Tray



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- **After 25 to 30 days, the silkworms stop eating and move to a tiny chamber of bamboo in the tray having small racks or twigs to spin cocoons. The silkworm spins the cocoon inside which further development into the silk moth takes place.**





Step II: The second step towards obtaining silk is the processing of silk. The pile of cocoons used to obtain silk fibres are kept under the sun or boiled or else exposed to steam to separate the silk fibres. This process is known as reeling the silk and is done using machines which unwinds the threads or fibres of silk from the cocoon which are then spun into silk threads, and are woven into silk cloth by weavers.



Boiling cocoon (left) and reeling of silk (right)

PLENARY

Application Based Questions -

Q. Write a caption for each of the figures given as figure (a-d).

(a)



(b)



(c)



(d)



Answer:

(a) Eggs of silk moth on mulberry leaves

(b) Silkworm

(c) Cocoon

(d) Cocoon with developing moth

Q. Write the difference between natural silk and artificial silk.

A. Natural silk is obtained from the cocoons of silkworms and it is made up of a protein. Natural silk is an animal fibre. Artificial silk is obtained from wood pulp and it is made up of modified plant material 'cellulose'.

If we perform the burning test, then natural silk fibre burns giving a smell of burning hair while artificial fibre burns giving a smell of burning paper.

ASSESSMENT & EVALUATION



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THANK

YOU