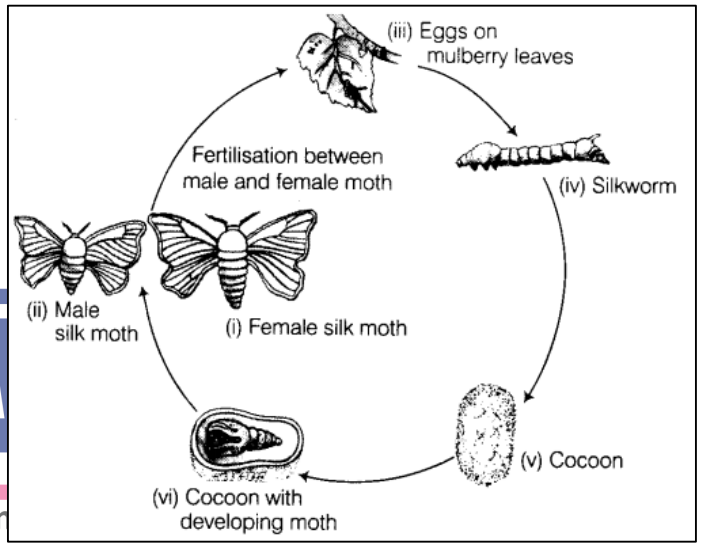
Health hazards in the wool industry: Wool industry is an important source of livelihood for many people in the country. The people who do the job of sorting the fleece of sheep into fibres of different qualities are called 'sorters.' The sorter's job is very risky because sometimes, they get infected by the bacteria called anthrax which cause a deadly blood disease called 'sorter's disease.' The risks faced by people working in any industry due to the nature of work is called 'occupational hazard.' Sorter's disease is an occupational hazard.

Silk

Silk is an animal fibre which is obtained from an insect called silk moth. Silkworms spin the silk fibres. Silk fibre is made up of a protein. Silk is the strongest natural fibre.

Sericulture: it means 'silk farming.' The rearing of silkworms for obtaining silk is called sericulture.

Life cycle of silk moth



1. Formation of silkworm: The female silk moth lays about 300 to 400 eggs at a time. The eggs hatch and the caterpillars or silkworms emerge. This is called the larval stage. The silkworm feeds on mulberry leaves.

2. Development of Cocoon: when the silkworm is ready to enter the next stage of its development called 'pupa', it first weaves a net to hold itself. The silkworm secretes fine filaments from two glands on its head. The filaments are made of a protein that hardens to form silk fibres when exposed to air. Soon the silkworm covers itself by silk fibres and turns into pupa. This covering is called 'cocoon.' The silk worm continues to develop in the form of pupa inside the cocoon to form the silk moth.

3. Production of Silk: In order to produce silk, the silkworm developing inside the cocoon is not allowed to mature into an adult silk moth. So, as soon as the cocoon is formed, it is used to obtain silk fibres and the developing silkworm gets killed. Some of the silkworms are allowed to live and mature into silk moths so that they can lay eggs to produce more silkworms. There are varieties of silk moths which look very different from one another and the silk yarn they yield is different in texture. Thus, tassar silk, kosa silk are obtained from cocoons spun by different types of moths. Mulberry silk is soft, lustrous and elastic and can be dyed in beautiful colours.

4. Pure and Artificial silk: pure silk is obtained from the cocoons of silkworm and it is made up of proteins. Artificial silk is obtained from wood pulp and it is made of modified plant material 'cellulose'.

From Cocoon to Silk: for obtaining silk, silk moths are reared and their cocoons are collected to get silk thread.

Rearing Silkworms: Female silk moth lays hundred of eggs at a time. The eggs are stored carefully on strips of paper and sold to silkworm farmers. The farmers keep eggs under hygienic condition. They warm them to a suitable temperature for the larvae to hatch from egg. The larvae are kept in clean bamboo trays along with young and freshly chopped mulberry leaves

Processing Silk: The cocoons are collected and boiled in water to kill the insect inside them. The resulting fibre is known as raw silk.

Reeling the Silk: The process of taking out fibres from the cocoon for use as silk is known as reeling the silk. Reeling is done in special machine. Silk fibres are spun into silk threads are woven into silk cloth by weavers.

Discovery of Silk: it was discovered in China long time back. The empress Si – lung – Chi was asked by the emperor Huang –ti to find the cause of damaged mulberry leaves. Later empress found that they were eaten up by worms. She also noticed that they were spinning shiny cocoons around them. Silk industry began in China and remained a secret for thousands of years. Later traders introduced silk to other countries. The route they travelled is still called 'silk route.'

Even today, China leads the world silk production. India is also among the leading silk producing countries of the world.

Health hazards in sericulture

a. Handling of dead worms with bare hands contributes to infection and illness.

b. Standing continuously for about 12-16 hours a day may lead to health disorders like headaches, spine etc.

c. Vapors from boiling cocoons and diesel fumes from machines may lead to respiratory diseases like asthma and bronchitis.

d. Continuous exposure to the noise made by spinning and winding may result in hearing disorders.

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