

IN THIS CHAPTER

- *Animal fibres*
- *Wool*
- *Processing fibres into wool*
- *Silk*
- *Vegetables fibres*

INTRODUCTION

In class VI you have learnt about some fibres obtained from plants. You also learnt that wool and silk are natural fibres. They are obtained from animals.

Animals fibres – Wool and silk



Fibre obtained from living things

Wool

Wool is the common name applied to soft curly fibres obtained chiefly from the fleece of domesticated sheep. Other wool bearing animals include the camel, the illama and vicuna. In addition to it, fur of angora rabbits resembles fine wool in texture.

Cashmere Wool

Cashmere wool is the finest wool. It is obtained from the cashmere goats found in the Kashmir region.

The wool is also known as pashmina and is woven or knitted into fine pashmina shawls and garments. The wool can also be blended with silk or cotton.



Cashmere goat

Yak Wool

Several breeds of sheep are found in different parts of our country. The fleece of sheep is not only source of wool. The yak wool is very common in Laddakh and Tibet. Yak wool is used to make coats, sweaters, blankets and hats.



Yak

Angora Wool



Angora rabbit

Angora wool is obtained from the Angora rabbit, a variety of domestic rabbit, bred for its long soft hair.

Do You Know?

Vicuna is a member of Llama family which gives us the softest coat cloth in the world. The vicunas are endangered species so their fibre is rare and very expensive, costing several thousand rupees per yard.

Mohair

Mohair, the fleece, taken from Angora goats, is very tough and strong. Angora goats are found in Turkey and Ankara. Mohair is used for making garments and home furnishings.



Angora goat

Processing Fibres into Wool

The wool which is used for knitting sweaters, shawls etc. is finished product of a long process which involves the following steps :

Step 1 : The fleece of the sheep along with thin layer of skin is removed from its body. Machines similar to those used by barbers are used to shave off hair usually hair are removed during the hot weather. This enables sheep to survive without their woollen fibres. Wool fibres are then processed to obtain woollen yarn. This process is called **shearing**.

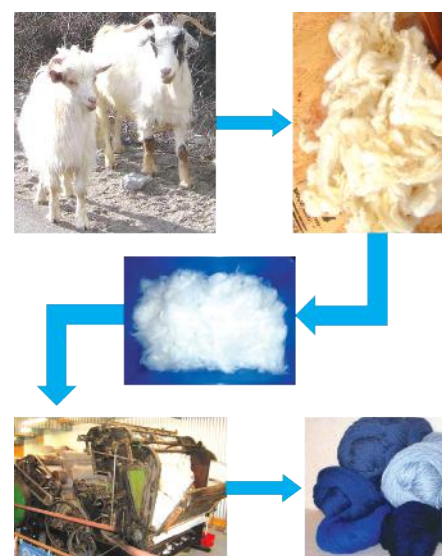
Step II : The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt. This process is called **scouring**.

Step III : This step is done after scouring. The hairy skin is sent to a factory where hair of different textures are separated or sorted.

Step IV : The small fluffy fibres, called burrs, are picked out from the hair. These are the same burrs which sometimes appear on your sweaters.

Step V : The fibres are dyed in various colours, as the natural fleece of sheep and goats is black, white or brown.

This process is called **dying**.



Wool Processing

Step VI : In the alongside figure, we can see how the fibres are straightened, combed and rolled into yarn. The longer fibres are made into wool for sweaters and the shorter fibres are spun and woven into woollen cloth.

Do You Know ?

It takes about 110 silkworm cocoons to make one good quality silk tie and about 2000 cocoons to make one silk dress. Like animal hair, silk does not conduct heat and is, therefore, a good insulator, keeping you warm in winter and cool in summer.

SILK

The use of silk as a fibre originated in China in 2640 B.C. History claims that in the mentioned year, Empress Si ling encouraged the rearing of silk worms on mulberry leaves and the seeling of the silk yarn was thus obtained.

Silk became such a precious thing that it was considered to be worth its weight in gold.

Trading in silk was the monopoly of China for a long time.

The fabric reached other parts of the kingdoms outside China through the breeding and management of silk worms for the production of silk is known as sericulture.

The eggs of the silk worm moth are incubated until they hatch and become worms called larva or caterpillars. The larval are fed on mulberry leaves for about six weeks. During this period each larvae sheds its skin four times. This is called moulting. At the end of this period they are ready to spin the cocoons.



Larva



Silkworm

After the complete cocoons have been gathered the initial step in silk manufacture is to kill the insects inside them. Thus the cocoon are first boiled or treated in ovens, killing the insects by heat. The silk fibre is obtained from the cocoons by a delicate process known as reeling or filature. The cocoons are first heated in boiling water to dissolve the gummy substance that holds the cocoon filament in place. After heating the filaments from four to eight cocoons are joined and twisted and are then combined with a number of other similarly twisted filaments to make a thread that wound on a reel. The resulting thread is called raw milk. Reeling is done by special machines, which unwind the threads or fibres of silk from the cocoon. Silk fibres are then spun into silk threads, which are woven into silk cloth by weavers.

VEGETABLE FIBRES

Cotton and jute are vegetables fibres. These include wide range of all textile fibres, flax, hemp, jute etc.

Vegetable fibres are based on cellulose, the material used by nature as a structural material in the plant world.

Know the Keywords :

Fibre : The materials from which clothes are made.

Shearing : The first step involved in wool, processing in which fleece is peeled off from sheep's body in one piece.

Shivers : fine strands of wool.

Moulting : Shedding of skin by the larva or caterpillars.

Muga : Beautiful and expensive golden coloured wild silk.

Point to Remember

- Cashmere wool is obtained from the cashmere goats found in the kashmir region.
- The Yak wool is very common in Laddakh and Tibet. It is used to make coats, sweaters, blankets and hats.
- Angora wool is obtained from the Angora rabbit.
- Mohair, the fleece, taken from Angora goats are found in Turkey and Ankora. It is used for making garments and home furnishings.
- Vegetable fibres are based on cellulose, the material used by nature as a structural material in the plant world.

EXERCISE TIME

A. Answer the following questions :

1. What is wool ?
2. What are animal fibres ? Write name of four animals from which we get wool.
3. What is mohair ?
4. Write the steps used in processing of wool from fibre.
5. What is silk ?
6. What are vegetable fibres ? Name them.
7. How do we get silk thread from silk worms ?

B. Fill in the blanks :

1. Angora wool is obtained from _____ goat.
2. Removing of hair from a sheep is called _____.
3. Yak wool is common in _____ and _____.
4. To remove dirt from the hair of sheep is called _____.
5. The materials from which clothes are made are _____.

C. Match the following :

Column 'A'

1. Yak
2. Cocoon
3. Scouring
4. Mulberry leaves

Column 'B'

- (i) cleaning sheared skin
- (ii) food of silk worm
- (iii) yields silk fibres
- (iv) wool yielding animals

D. Write 'T' for true and 'F' for false statements :

1. Man-made fibres are called synthetic fibre.
2. Yak wool is very common in Punjab.
3. Shearing hurts the animals.
4. Silk fibres are made of fats.
5. Cotton and jute are vegetable fibres.

E. Tick (✓) the correct option :

1. Wool is obtained chiefly from the fleece of domesticated :

(i) goat

(ii) polar bear

(iii) sheep

2. Cashmere wool is also known as :

(i) finest wool

(ii) pashmina

(iii) none of them

3. Angora goat is found in Turkey and :

(i) Pakistan

(ii) Kashmir

(iii) Ankara

4. The fibres are dyed in various colours as the natural fleece of sheep and goats is black, white, brown. This process is called :

(i) shearing

(ii) rouring

(iii) dyeing



Creative Work

- **Collect the pictures of different animals from which wool is obtained. Prepare a scrapbook of your own and find which of these are found in India.**