

## WOOL – THE ANIMAL FIBER - PART I

REF: TT/ JUNE 2018 / WK 2

### Introduction

Since the Stone Age, wool has been appreciated as one of the most effective forms of protection to man. It is an animal fiber, derived from the fleece of sheep or of other hairy mammals, such as goats and camels.

Wool could be sourced from the fleece of sheep and other animals. These include cashmere from goats, mohair from rabbits and other types of wool from camellias, musk ox, Angora rabbit, vicuna, guanaco, pashmina and alpaca. Wool has some special qualities which distinguish it from hair or fur. The best quality wool comes from merino sheep, found in Australia. Wool is a natural fiber composed of proteins, as it comes from the fleece of sheep. Each sheep has various grades of fleece found in their coat with the highest grade fibers being found on the sides, shoulders, and back, while the lowest grade is found on the lower legs.

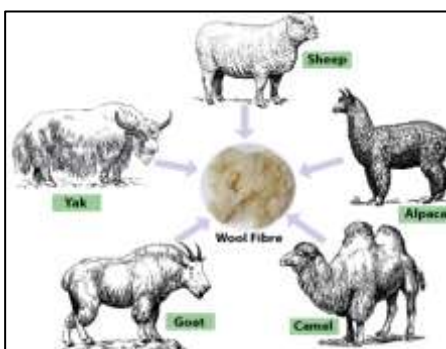


Fig 1.1 Sources of Wool fiber



## General Properties

Wool has diameters ranging from about 16 to 40 microns. Length is greatest for the coarsest fibers; extremely coarse fibers are about 14 inches in length. Fine wools are approximately 1.5 to 3 inches (4 to 7.5 cm) long. The fiber is characterized by waviness with up to 30 waves per inch (12 per cm) in fine fibers and 5 per inch (2 per cm) or less in coarser fibers. The colour of the fiber is generally whitish. Also, brown or black, in coarse types, and coarse wools have higher lustre than fine types.

The quality of wool is determined by its fiber diameter, crimp, yield, colour, and staple strength. Fiber diameter is the most important wool characteristic determining quality and price. Wool taken from sheep produced for meat is typically coarser and has fibers 1.5 to 6 in (38 to 152 mm) in length.



Fig 1.2 Wool Fibers

## Wool Processing – First Step – Shearing

[Watch out this short video to see the first step of wool processing – Shearing and quality classifying.](#)

To be continued...

Wishing you a great week ahead!

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