

Processing of yak hair fiber into value added products



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Introduction

Two kinds of hair fibers are found in yak i.e. outer coarse and inner down fiber, sometimes called as yak wool. Shearing in yak is performed once in a year. Yak produces about 0.5-1.5 kg of coarse hair and 250-750g of fine hair per year. Shearing of tail hair is done once in two years which yields about 500-600g. Yak hair fiber products are water proof and highly durable. They provide higher warmth in winter.

Yak hair

The outer coarse body hair of yak is highly thick with a diameter of 36.78μ . The hetero medullated fiber observed in yak hair is 1.08%. The hairy medullated fiber in yak is 25.15%. The inner down fiber of yak provides insulation against winter. The fineness of down hair or fine yak wool is about 19.57μ .



Hand knotted carpet

The carpet has a common basic utility as covering for floor or as cushion for sofa or chairs with a more attractive surface, which is softer and warmer. In processing of carpets, the raw yak hair fiber is washed with detergent solution and dried. Then the fibers are manually separated (carding) and made a fiber roll from which yarn is prepared. The yarn is subjected to dyeing with appropriate colour and dried. Then this yarn is utilized for making designs in the hand knotted carpets. In traditional way, the carpets are prepared on a wooden frame. Warp (longitudinal thread) of cotton yarn on wooden frame form the base upon which carpet is knotted. This is wound around two beams of the loom. Weft of wool passes horizontally in and out of the warp threads. Weft provides support for the knots, which are made by tying a yarn of wool around two warp threads. Knotting and cutting with a hooked knife is done simultaneously. Generally the master weaver selects the design and colours to be used for each knot. Approximately, five carpets can be prepared in one stretch. Different type of hand-knotted carpets is prepared by varying the knot density, its height and design. Incarnation of designs depicting flora and fauna especially yak, the cultural symbol of *monpas* is a common design. Generally, about 1 kg of raw yak hair, 0.75 kg of woolen and 0.50 kg of cotton yarn is consumed in producing one carpet of standard size 18×18 inches. Coarse quality wool/yarn is used in making low knottage but having higher height pile carpets.



Caps

The traditional cap prepared from coarse yak hair is called *chitpa jaamu*. It gives good protection against rain and snow fall. Whey derived from chura is boiled well and yak hair is soaked into it. While it is hot, by pressing, matting and moulding, the yak hair is given the shape of local cap. This unique cap commonly contains four protrusions to drain the rain water. Certain other types of caps are also prepared from coarse yak hair by the local people. Value added caps can be prepared from yak hair by blending 50:50 with sheep wool and 75:25 with Angora rabbit wool. This blended yak hair caps are attractive, aesthetic and highly acceptable by the tourists.



Doormat

Coarse yak hair is utilized for the preparation of doormat. Like carpets, doormats are prepared on a wooden frame. Warp (longitudinal thread) of cotton yarn on wooden frame form the base upon which doormat is knotted. This is wound around two beams of the loom. Weft of yarn from coarse yak hair passes horizontally in and out of the warp threads. Weft provides support for the knots, which are made by tying a yarn of hair fiber around two warp threads. Two rows of knotting are carried out and then cutting is done. Knotting and cutting with a hooked knife is done simultaneously. Generally the master weaver selects the design and colours to be used for each knot. The doormats prepared from yak hair are highly water proof and durable.



Chamar/fly whisk

Usually tail hair from yak is used for making *Chamar*. Yak tail hair is washed with detergent powder followed by shampoo and then cleaned with comb. This process enables cleaning and separation of hair fibers (carding). A specially designed wooden handle is taken and thick thread is nailed into the centre of the tip. The hair fibers are arranged around the handle over which the thread is wound to tie it along with the handle. Then fevicol is applied over it. The hair hanging from the tied end is folded once, tied with thread and fevicol is applied. Likewise it may be repeated once more to make it stronger and good appealing. Sometimes the whole tail



hair along with the skin of the tail is utilized to prepare fly whisk/broom stick. A stick is inserted into the skin and the open portion is stitched to attach to the stick.

Rope (zidak)

The longer hairs are preferred to make ropes which have multiple use such as tying the legs of cow while milking or to tie the tents. Rope made from black and white yarn is admired for its appearance. The black and white yarns are prepared separately and twisted by holding one end to the ground to make the rope. The strands of yarn may be increased to improve the strength of the rope. Rope made of yak hair is durable and withstands rain, wind and sun.



Apparels

The fine hair from yak is utilized in hand weaving to prepare various types of garments and bags. They offer great protection in winter.



Blanket

The blankets are prepared from coarse yak hair through hand weaving. These blankets are highly utilized in making tents which gives good protection even against a thick layer of snow over it.



Hand bags

Both coarse and fine hair from yak is utilized to make bags. It is prepared in hand weaving machine as a larger piece/sheet and then cut to make appropriate size of bags. The bags have different uses such as to carry feed for the animal and to carry household items. Hand bags are permanent attire of the herdsmen whenever he goes along with the yaks.



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