

Pashmina wool—a valuable commodity

Abstract

The conversion of goat hair into Pashmina was investigated. Pashmina is obtained from the Changthangi goats found in the Himalayan regions. The nomadic herders and animals that live in these regions have to adapt to harsh environments. The Pashmina goats play an important role in the livelihoods of the nomadic herders.

Keywords: changthangi, pashmina, goat, cashmere, himalayas, ladakh

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Introduction

The study investigated the ethnozoological aspects of agriculture in hostile environments and the production of the finest wool in the world. Changthangi or Pashmina goats can tolerate high altitude and the harsh environment of the Himalayan desert by growing an undercoat of fine hair which serves as insulation to keep them warm. This is the origin of pashmina wool.

The research showed that the animals found in these regions such as yak, sheep and goats play a critical role in allowing humans to exist in a harsh environment. The elevation of these regions is upwards of 4,350 m (14,270 ft.) which causes a lack of oxygen, cold temperatures ranging from -20°C (-4°F) to -40°C (-40°F), strong winds, meager rainfall and lack of vegetation. This report will focus on the domestic Changthangi (or Pashmina) breed which produces wool that is known for its firmness, warmth, durability, lightness, softness and ability to absorb dyes and moisture.

Landscapes, harsh climates and nomadic lifestyle

Living in extreme high country, in one of the most remote sections of Tibet's Changthang plateau, at elevations higher than 14000 feet in the Ladakh Range, the Changpa rely on pashmina goat, sheep and yak herding for subsistence (Figure 1–3).



Figure 1 Landscape of the Changthang Plateau.



Figure 2 Pashmina goat, sheep and yak herding.



Figure 3 Pashmina Goats in harsh conditions.

Husbandry

Nomadic herders sometimes live in tents. In the summer they move the mature goats to locations with vegetation. Often the ground is covered with snow which the goats paw at to obtain access to the sparse vegetation. In the winter, dried surface grass, herbs and shrubs are consumed. The goats are placed in stone lined paddocks at night. The kids remain with the herders all day and are fed on mother's milk and barley which is planted each year. During the day the kids are

sometimes placed in holes with some fabric to protect them from the wind. Adult castrated males are often used as pack animals when the herders are moving to a new location. Some herders have houses built with natural occurring materials and it houses both herders and sick animals. If a kid wanders off, the female herder will cry until the kid is found and returned to the flock. Goats and sheep are often intermixed. Mortality rate for the first year is 54% and is caused by respiratory illnesses, wild animals and due to exposure to the cold climate. The adult goat color may be white which is most valuable, brownish red, fawn, gray and black. They have small horns with the male's being slightly larger. Adult body weight is 16–17 kg (35.3–37.5 lb.) (Figure 4 & 5).^{1,2}



Figure 4 Changpa nomads with Pashmina goats.



Figure 5 Changpa nomads with Pashmina goats grazing in sparse pasture.

Pashmina wool

The finest fibers have a diameter of 12–15 microns, fine fibers under 16.5 microns, medium fibers 16.5–17.5 microns and coarse fibers up to 18 microns. On an equal weight basis pashmina has three times the insulating value compared to wool. Most goats have two types of hair called guard hair and pashmina. The pashmina (inner

hair which is the source of the wool) grows on the neck, body, hind quarter, face and legs. Some goats have it over almost their entire body. This fine hair protects the animal from cold temperatures. The hair is removed with an iron comb in late spring when the goat is shedding. The pashmina hair yield per goat ranges from 310g to 520g. The higher values are from males and the yield increases with age. Due to demand for the hair and a limited supply, a reduced quality material is often produced by mixing goat hair and combining it with hair from other animals (e.g. silk, camel).

Economics of raising Pashmina goat

In the past these goats were slaughtered for food. Since the hair is a greater source of income than meat usually only animals that are in bad health are slaughtered. The average carcass characteristics of the pashmina goat are shown in Table 1. In spite of the fact that the pashmina wool is very expensive with some garments costing in the thousands of dollars the herders only receive a modest income. For example, the profit from a goat is ~15 U.S. dollars/ year and annual income for a household (average of 3 adults and 2 children) is 220–425 U.S. dollars. The net return for pashmina goat is 35–40%.³

Table 1 Average carcass characteristics of Pashmina goat

Sex	Slaughter weight kg (lb)	Carcass weight kg (lb)	Dressing percentage (%)
Male	36 (79)	15 (33)	43%
Female	28 (62)	12 (26)	43%
Overall	31 (68)	13 (29)	43%

Conclusion

Agricultural life at high altitudes is a struggle and requires special adaptations in people and animals in order to survive. The high desirability of the wool enables the economic feasibility of pashmina production. Pashmina goats play an important role in the livelihoods of nomadic herders or Changpa in the Tibetan plateau and the surrounding regions.

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None.

Conflict of interest

Author declares that there is no conflict of interest.

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