Feeding for FIBER

While genotype determines a sheep or goat's capacity for fiber production, its ability to express its genetic potential can be modified by several factors, including nutrition.

Nutrient requirements for wool growth in wool-producing sheep are included in the maintenance component. The small amount of additional nutrients required does not increase nutrient requirements detectably above those of wool-less or hair sheep. Thus, rations should be formulated to meet needs according to the sheep's stage and level of production.

Sulfur-containing amino acids play a major role in fiber growth, suggesting that wool sheep require more sulfur than hair sheep: a 10:1 nitrogen to sulfur ratio vs. 12:1 for hair sheep. Minerals, such as sulfur, cobalt, copper, iodine, selenium and zinc, also play an important role in fiber quantity and quality.

The nutritional status of the ewe during gestation can influence wool production of her offspring, by influencing follicle development in the fetuses.

There is a direct relationship between fiber growth and feed intake. The more feed (calories) an animal consumes, the more fiber it will produce in a given period. This increased rate of fiber production is associated with an increase in both fiber length and diameter.

Pasture and/or browse should be the main source of nutrition for fiber-producing animals. When pasture is not available, hay should be the main part of the diet. Supplementing with some grain can be a good way to increase nutrient density. This practice can be especially beneficial during times of drought or poor pasture quality.

Angora goats have higher nutritional requirements, especially for protein. And, unlike sheep and other goats, they give nutritional priority to fiber growth at the expense of other demands. As a result, their daily mohair fiber growth (g/day) is factored into their nutrient requirements.

Poorer nutrition, on the other hand, leads to finer fiber, but at the cost of lower yield, poor health, and poor fertility. Poor nutrition, even for a short period of time, can also cause tenderness or "breaks" in the fibers; thereby, reducing value. "Medium" feeding is best for fiber production.

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