

# Ensuring Nutrition for Goats

## Nutritional Requirements

Understanding nutritional requirements for goats is essential to goat producers. Goats have a unique physiology that requires a balanced diet of water, energy, protein, minerals, and vitamins. A properly balanced diet increases the likelihood of proper body maintenance, growth, reproduction, pregnancy, and meat and milk production. Nutritional deficiencies will have undesirable effects and may result in disease and illness.



Because goats have a smaller digestive tract than that of cattle, they must consume a more concentrated diet to maintain energy. Understanding the significance of basic nutritional requirements for goats and the provision of quality feed and hay made available to the animals, should result in proper nutritional management. The table below better illustrates nutritional requirements for goats based upon the stage of development, the gender, and the utility.

**Nutrient Requirements for Meat and Fiber Producing Goats<sup>1,2</sup>**

Nutrient	Young Goats <sup>3</sup>		Does (80 lbs.)			Bucks (80 to 120 lbs.)
	Weanling (30 lbs.)	Yearling (60 lbs.)	Dry (Pregnant)	Lactating		
				Avg. Milk	High Milk	
Daily Feed, lbs.	2.0	3.0	4.5	4.5	5.0	5.0
Total Digestible Nutrients %	68	65	60	60	65	60
Protein %	14	12	10	11	14	11
Calcium %	0.6	0.4	0.4	0.4	0.6	0.4
Phosphorus %	0.3	0.2	0.2	0.2	0.3	0.2

<sup>1</sup> Nutrient Requirements of Goats. (1981). National Research Council.

<sup>2</sup> Pinkerton, F. (1989). Feeding Programs for Angora Goats. Bulletin 605. Langston University, OK.

<sup>3</sup> Expected weight gain > 0.44 lb / day.

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Nutritional requirements are based on meeting daily nutritional needs. In order to sufficiently feed them, group the animals according to nutritional needs. In barn feeding situations, such as during the winter months, animals should be provided with high quality hay and supplemented with properly balanced grain feed. Total digestible nutrients (TDN) are a measure of energy and quality of feeds. Low quality forages contain 40 to 50 percent TDN, good quality forages contain from 55 to 70 percent TDN, and concentrate feeds contain from 70 to 90 percent TDN. Inadequate provision of nutrition can affect growth rate, milk production, reproduction, and disease resistance.

## Sampling Information

To ensure that grain feed and hay meet minimal nutritional requirements, you may use the Alabama Cooperative Extension System's feed and hay analysis, which is provided at a nominal cost. Sampling feed or hay is important for understanding nutritional values of available products. This publication only addresses the basic requirements to submit a feed or hay sample for analysis.

Before obtaining feed or hay samples, contact your local Extension office to obtain feed or hay sample sheets, plastic bags, and mailing envelopes. Keep accurate records of samples acquired so that samples will match reports. Attach sample sheet to appropriate bagged sample to ensure accurate reports. Submit one report per sample and do not forget to complete the sample form and to include payment.

In the first part of the sample sheet, you must provide contact information and select the desired analysis. While a basic analysis may be less expensive, its results also may be less comprehensive than needed.

In the second part of the sample sheet, you must identify the sample as hay, silage, mixed ration, or grain. It is important to obtain a representative sample of items to be tested; otherwise, chemical analysis will be compromised. A sample that represents the entire lot of feed or hay to be analyzed will reflect the true value of the lot.

Hay samples should be taken with a hay probe. Check with your county Extension office for availability of a probe. Each sample should represent a batch or lot of hay that has been treated and processed in the same manner (i.e., same field and harvest date). Submit separate samples for proper representation of different hay batches to be used.

For square bales, acquire core samples from as many bales as possible. Drive hay probe into end of square bales to obtain a varied sample.

For round bales, take core samples through round end of bale, and obtain as many samples as possible. Acquire mixed feed or grain for on-farm feed samples after feed is well mixed. Use a grain probe to take samples from throughout feed storage area.

In the last part of the sample sheet, you must choose the type of animal and supplement to which the analysis applies. This information allows the specialist to provide the appropriate daily nutritional requirements for your animal.

Remember, informed producers are more likely to be successful and satisfied with their nutritional management practices.

## Source

Luginbuhl, Jean-Marie and Poore, Matt. (October 1998). *Nutrition of meat goats*. North Carolina State University. Extension Animal Husbandry. Retrieved November 6, 2006, from [http://www.cals.ncsu.edu/an\\_sci/extension/animal/meatgoat/MGNutr.htm](http://www.cals.ncsu.edu/an_sci/extension/animal/meatgoat/MGNutr.htm).



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**For more information**, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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