# Nutrition 101

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The most frequently asked questions I get in consulting young peoples' goat projects deal with nutrition. Unfortunately, these questions are the most difficult to answer because there are so many factors that have to be considered when addressing topics related to nutrition.

In the east, we have to feed diets fairly high in corn just to maintain bloom due to our humidity, while in the southwest, a high corn diet will burn up a kid's gut! Other issues include appetite, breed, age and sex differences. Fortunately, there are a number of constants when it comes to goat nutrition. Initially, let me say that there is NO MAGIC FEED! Regardless of what they say in their advertising campaigns, no company produces a feed that will transform a sorry goat into a champion. However, most commercial feed companies make a high quality show goat feed. You simply need to find one that your prospects will eat, you can acquire easily, is fresh and you can AFFORD!

When it comes to understanding nutrition, there are basically three areas to consider; energy, protein and fiber. Energy is a key issue in kid rations. The key energy or "calorie" content of a feed is directly related to the grain component of a ration and is the primary component for growth. Corn, barley, oats, milo, etc. are all feedstuffs that are fairly high in energy. However, each of these feedstuffs creates a different response to growth and fattening of a prospect. Corn is the most common energy feed due to its relative low cost and good growth response. Unfortunately, corn also lays on a "softer fat" which can be a problem with higher percentage boer kids. Barley based rations provide excellent growth response and lay on a much harder fat than corn, but are often harder to find and are much more expensive. Oats, although an energy feed, are generally considered a growing feed that creates less bloom, keeping kids much leaner. Most commercial rations contain all three of these feedstuffs in varying ratios based on whether the feed is a starter, grower, finisher or holding ration.

Protein is the second issue relative to nutrition and is easily the most often misunderstood. Protein feeds are generally fairly low in energy values but much higher in protein value when compared to grains. Protein feeds are generally all the "meals": soybean meal, alfalfa meal, cottonseed meal, linseed meal, fish meal, blood meal, etc. These products can range form 17 to 85+ percent protein. Once again, most commercial feeds use a mixture of these feedstuffs in order to achieve cost effectiveness and, likewise, to provide a more diverse amino acid availability as these proteins are broken down and reassembled for the kids usage (Ruminant Nutrition 101). Generally speaking, most starter rations range form 18 to 21+ percent protein, grower-developer rations range form 16 to 18 percent while most finishing rations range from 13 to 15 percent protein.

Since we know that muscle is protein, most people then assume that the higher percent protein level you feed, the more muscle you will have –BE CAREFUL! It is true that if you limit the protein a kid receives, it will never develop its full genetic potential for muscle shape. But we should also remember that feeding excess levels of protein, in addition to being costly, result in the excess nitrogen being shed in the urine and burning off body fat (Atkins' diet) thus making it hard to bloom your prospect.

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Many people get overly concerned about the percentage of protein in their ration. I always instruct my clients that the concern is NOT percent protein but is pounds of protein consumed. For example, a goat eating 2.5 lbs. of a 15 percent feed (2.5 x .15 = .375 lbs.) is consuming .375 lbs. of protein a day. A goat eating 2.0 lbs. of an 18 percent feed (2.0 x .18 = .36 lbs.) is consuming .36 lbs. of protein a day. Therefore, the kid eating the 15 percent ration is actually consuming more pounds of protein a day and thus has more potential to express his genetics for muscle. Another way to look at this issue is when we start holding or limiting a kid's feed. I often get calls about a week or so before a fair with a concerned mother saying their goat is "losing" its top or is "washing" out. Now let's think about this. If muscle is protein, then when we reduce protein levels, what is going to happen? We lose muscle shape. This goat was eating 4.0 lbs. of a 15 percent ration (4.0 x .15 = .60 lbs. of protein), we are now feeding him 2 lbs. of the same ration (2.0 x .15 lbs = .30 lbs of protein). And we wonder why little fluffy is losing muscle shape! Something to think about – Huh?

The final topic to consider in nutrition is fiber. My response is simple: GOATS ARE NOT SHEEP!! It is crucial for a good market goat to have some middle and rib shape. Very few true goat judges want a tight flanked "dog-bone" looking goat. I am not saying they need to have a pot-gutted, but as I said -----GOATS ARE NOT SHEEP!! Since goats are ruminants, fiber also serves to keep the rumen functioning and aids in keeping the kids on-feed, which is half the battle. The question is how much hay and what kind of hay do I feed? Unfortunately, there is not a single right answer for those questions. Every goat is different. A super trim middled kid needs to consume much more hay than a really deep bodied, big middled kid. I prefer to feed a good grass hay as opposed to a legume hay. The grass hays are generally cheaper and if you are feeding a high quality grain ration then the hay is serving more as a filler rather than a protein source. The grass hays also have more EFFECTIVE fiber, meaning that it will requite more chewing to digest the hay, thus more saliva is created which serves to buffer the rumen of the kid and again helping to give him/her on feed.

Just remember ---KEEP IT SIMPLE. Provide a good, fresh, clean feed and if you have trouble, don't be scared to ask for help!

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