

Feeding the Lamb Crop

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by Mike Neary, Ph.D.
Extension Sheep Specialist
Purdue University

Feeding and management of the lamb crop is an important phase of the sheep production cycle. This is not an easy topic to discuss primarily, because there are a number of ways to grow and finish lambs. The type of feeding program will depend in large part on what area of the country one is located, what type of production system is utilized, what the marketing options are and, of course, what feed resources are available.

Feeding lambs involves the use of forages, grains for energy, protein supplements, vitamin and mineral supplements, and feed additives. The production and marketing goals will dictate what amounts or rations the above feedstuffs will be combined into to make a balanced diet. Lambs can be successfully fed using many combinations of these feeds. Nutrition of lambs can be satisfied from a diet that is all forage to one that is essentially all grain and protein concentrates, and all combinations between these extremes.

What are the Nutrient Needs of Lambs?

The absolute and relative amounts of the nutrients needed by lambs are dependent on numerous factors. Included in these are: body weight or size, desired growth rate of the lambs and the genetic potential lambs have to gain weight. Some breeds or crosses of breeds have a high propensity to gain weight rapidly, while other genetic types are considered moderate or low in growth potential.

Nutrition can be a limiting factor in lamb growth and performance. However, more feed or higher levels of nutrients will not increase growth or performance of lambs past their genetic capabilities.

The phases of lamb growth are often distinct by the age of the lamb. Usually the phases are classified as consisting of the young nursing lamb, the weaned growing lamb, and the finishing phase. Each phase has unique nutritional requirements.

Young Nursing Lambs

The nursing lambs' requirements are quite variable, depending on age and weight. If we assume these lambs are young and are from 20 to 45 pounds, their requirements range from 72 to 80% TDN, 16 to 24% crude protein, .5 to .8% calcium and .25 to .3% phosphorous. A targeted daily gain for lambs during this period would be from .4 to .65 lbs.

Generally, when the percentage requirements for the specific nutrients are the highest, the lamb is receiving its mother's milk as the sole or major source of nutrition. Ewe milk is high in protein, milk sugars, fat, calcium, phosphorous, and other important nutrients. Peak milk production for ewes occurs at about 20 days of lactation, stays high for two to three weeks and then declines. Thus, lambs do quite well on mother's milk only, until about 25 to 30 days of age. After about 30 to 40 days of age the lambs' needs for nutrients to support a reasonable growth rate are greater than most ewes' ability to produce milk.

If the sheep operation is a pasture or range based system, the lambs will begin serious grazing at this age to compensate for these increased needs. Considering the nutrient requirements, it is important that lambs have access to good quality forages. Forages that are of an appropriate botanical mix and of a stage of maturity that enhance nutritional content are important. It is important to realize that lambs at this age have limited potential to consume forages, their rumens are just starting to function and they have high nutrient needs. Thus, forage quality is very critical if one expects good growth rates.

Another management consideration that is very important for forage based systems is control of internal parasites. A high parasite load will wreck havoc on lamb gains and can even result in death of the lambs.

If one is producing sheep in a farm flock production scheme, either in the winter time or in drylot, lambs definitely need supplemental nutrition to the ewe's milk. This involves a good creep feeding program and is the delivery of a high quality feed in a system that precludes the ewes. Usually, a creep feeding system is based on feeding high grain rations, either in the form of a pellet or a mixed rations containing a grain source, a protein source, and minerals. A good creep feed should contain 16 to 20% crude protein, have a TDN content of 72 to 75% and contain an appropriate (2:1) ratio of calcium to phosphorous (to prevent urinary calculi). Also, lambs consuming creep feed should have a good quality hay, have sheep mineral available and be able to access a water source.

The Growing Lamb

This phase consists of lambs between the weight ranges of 45 to about 80 pounds. Often, the growing and finishing phases are combined into one phase and similar type diets are fed throughout, with some difference in the percentage of protein fed. For this article, the phases will be considered separate to help with clarity.

Lambs with high to moderate growth potential that are fed a grain based diet with proper amounts of protein should gain from .5 to .8 pounds per day. To accomplish these gains, lambs' diets need to contain 73 to 78% TDN, 14 to 16% protein and have around .5% calcium and .25% phosphorous. Lambs need to be consuming diets of these characteristics at the rate of about 2.5 to 3.5% of their body weight daily to grow at these target rates.

If lambs are grown on high levels of forage, then one can expect slower gains than if fed diets with a high amount of grain. Gains for lambs grown on pasture will normally be from .25 to .5 pounds per day. This will be dependent upon forage species, forage maturity, weather factors, and parasite control. These slower gains are not undesirable if they are cost effective. Each situation is unique, depending on grain availability and price, pasture availability and the primary market produced for.

Finishing Lambs

Unless one has a special market for light weight (60 to 80 lbs) lambs to an ethnic market or sells feeder lambs, a period of "hard" feeding a high grain based diet to get lambs to weight and carcass grade is required in the United States. Lamb processors prefer lambs in the 110 to 140 pound range, with a minimum of fat cover (.2 inches) to grade and dress at a high percent. It is difficult to attain these targets without a period of high grain feeding. This period usually lasts a minimum of 30 days, depending on weight on feed and target weight at finishing.

Lamb requirements for the finishing phase are 73 to 78% TDN, 12-14% protein, .5% calcium and .25% phosphorous. If lambs are fed from 3 to 4% of their body weight daily, they should gain between .6 and 1.0 pound per day.

When finishing lambs on high grain diets acidosis, enterotoxemia and urinary calculi can be potential problems. Acidosis can be prevented by including at least 10% roughage in the diet, by feeding a rumen buffer like sodium bicarbonate and by avoiding quick changes in the type or amount of the ration that is fed. When dietary changes are made, it may take seven to 14 days to accomplish these changes to avoid acidosis. Urinary calculi can be avoided by a calcium to phosphorous ratio of at least 2:1, having salt/mineral available free choice, and by feeding a urine acidifier like ammonium chloride. Getting lambs to drink adequate quantities of water help prevent urinary calculi.

Summary

Lambs have various nutrient requirements that are dependent on age, weight and ability to grow. Also, there are numerous nutritional strategies that can be used to supply essential nutrients to lambs. These strategies used will in large part be determined by available feed resources that are unique to the type of sheep and system used.