

# Livestock Links

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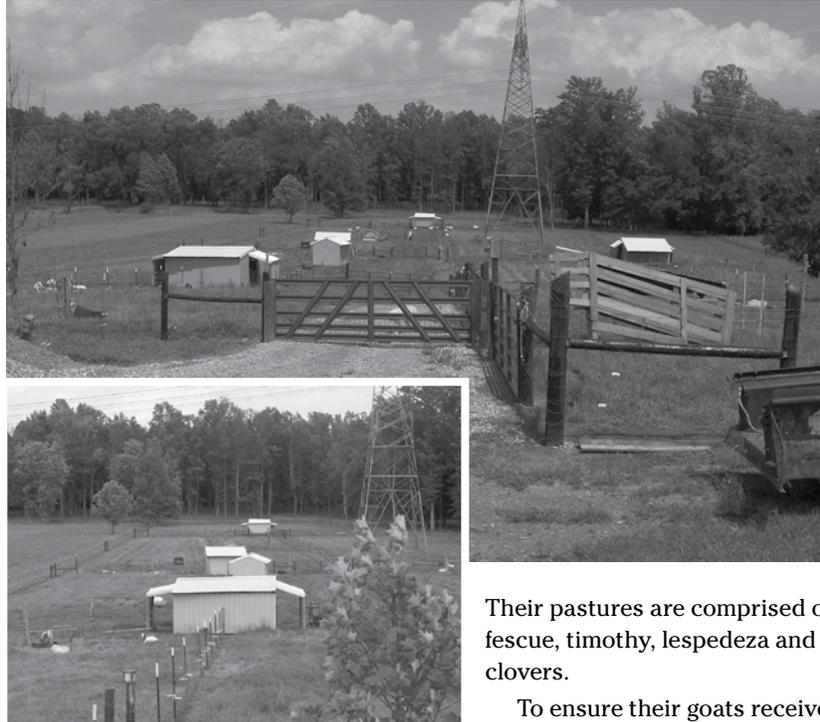
## Pasture Management—Goat Style

**Robert Spencer**, Extension Specialist, Animal Science and Forages

The majority of livestock producers rely on forages as the primary source of nutrition for their animals. Whether it is cattle, goats or sheep, each producer needs a strategy that ensures quality forage production that is sustainable. Earla and Ken Roberts are prime examples of ideal producers with such a strategy. They are a retired couple in Limestone County who have been raising meat goats for about 4 years. The name of their farm is Character Boer Goat Ranch. Although they have limited farming experience, they have developed forage management skills worthy of spotlighting.

The Roberts have 8½ acres in the shape of a rectangle. Ken admits pastures come in all different shapes and sizes. They have divided the overall pasture into four rows (lengthwise) and subdivided with cross fencing, which provides them with a total of 14 paddocks. The fencing consists of woven wire and a single strand of hot wire to keep goats off the fences. A combination of wide and narrow gates allows movement of equipment and goats from one pasture to another.

They currently have 29 goats (16 does, two bucks and 11 kids) on their farm and try to maintain their stocking rate to no more than six goats per acre. This year, with sufficient rainfall, they actually had to bush-hog their pastures to keep forages at a reasonable height.



Their pastures are comprised of fescue, timothy, lespedeza and clovers.

To ensure their goats receive a balanced diet, they provide supplemental rations and hay. They generally buy about 300 bales of hay per year to feed during winter months and when does are lactating. To keep their goats accustomed to interacting with humans, they provide limited quantities of feed rations on an as-needed basis.

While Ken has no experience with livestock, Earla has experience with dairy cows. While her children were still young (during a previous marriage), they lived on a small farm site and had dairy cows to provide milk for the family. Years later, she met and married Ken, and they moved to a small farm site outside of Huntsville. Shortly after, they acquired a few young goats. Before long, they were in the goat business. They have developed a mutually beneficial relationship with a neighbor who also raises goats. Both farms have strived to improve their operations.

So what is their forage management strategy? Ken says the most important practice they implemented was annual soil testing. Verifying soil fertility is important to determine whether fertilizer and lime application is necessary. If necessary, apply based on soil test recommendations. Proper soil conditioning ensures healthy and productive vegetation. Ken says proper soil nutrient management was essential to the survival of their pastures during these past few years of drought and hot summers.

His other recommendation is to develop a plan for rotational grazing. Ken says several years ago, a goat producer from the Sand Mountain area shared those words of advice and the implementation of such practices has been beneficial in

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several ways: (1) it has allowed them to have sufficient foraging despite repeated years of limited rainfall; and, (2) gastrointestinal parasites have become less of a problem. Earla and Ken generally move their goats every 30 days, within the available paddocks. Shortly after deworming, they move the goats onto a clean pasture. Less frequent deworming reduces anthelmintic expenditures. The benefit of pasture rotation and limited use of medicines allows them to maintain a healthier herd of goats.

When asked what recommendations they would share so that others can be as successful, Ken and Earla have the following words of advice. (1) Soil test on an annual basis and follow recommendations based on those tests. (2) Fertilizer and agricultural lime application (as needed) is essential to healthy, productive pastures. (3) Healthy pastures are more likely to survive extreme environmental conditions. (4) Have a pasture management plan that includes rotational grazing. (5) Start out simple and develop additional paddocks as time and money allows. (6) Keep animals moving from one pasture to another on a regular basis. (7) Always look for innovative ideas to improve pasture management skills.

These words are worthy of paying heed by anyone who relies on forage-based livestock production or owns horses.

## Feeding the Goat Herd

Darrell Rankins Jr., Extension Animal Scientist

Goat production in Alabama should rely heavily on a good forage program. The forage program should consist of browse and pasture. A good mix is about 2 acres of browse for every 1 acre of open grassland. The biggest problem for maintaining this combination is that the browse will not grow back once the goats have been on it for more than two growing seasons.

Because of the goat's natural ability to select particular plants as well as specific plant parts, they can meet most of their nutritional needs as long as forage availability is not limiting. During times of adequate forage availability, the only requirement for supplementation would be for salt and minerals. For much of the year, these requirements can be met by providing free-choice trace mineral salt. During late summer and periods of hay feeding, a source of supplemental phosphorus should also be provided. These needs can be met by providing a mineral that contains 6 to 12 percent phosphorus. During periods of inadequate forage availability (i.e., drought and winter months), they do need supplemental feeding. Most supplemental feeding programs will be based on feeding hay

and some sort of supplement. Most of the hay that is produced in Alabama contains 50 to 55 percent total digestible nutrients (TDN) and 10 to 11 percent crude protein. When comparing this to goat requirements (Table 1), it becomes apparent that hay will probably be adequate to meet maintenance needs, but becomes inadequate for late pregnancy and lactation, especially with regard to energy (TDN) content.

If hay is being fed to the goat herd, it is important to determine the quality of the hay and then determine whether energy, protein, both or neither is required to supplement the hay. For mature goats that are not in late pregnancy or nursing kids, the hay will probably meet nutritional needs. However, if the goats are in late pregnancy, supplemental energy will likely be required. For lactation, both energy and protein will probably be needed.

Feeding hay to goats results in a tremendous amount of wasted hay. The most wasteful situation is one that involves feeding free-choice round bales without any kind of hay rack or panel enclosing the bale. Goats will climb on a bale and continually pull hay onto the ground where they will soil it. If neither availability nor labor is a problem, then small square bales should be used where daily amounts can be rationed out and spread over several feeders so that all goats can have access to the hay. The better the quality of the hay, the less will be wasted.

An extremely effective way to supplement goats in the Southeast is to limit graze pastures containing cool-season, annual forages that are extremely high in energy and protein content. Ideally, ryegrass, rye, wheat, oats or some combination of these forages should be planted on a prepared seedbed in September and then used after January as a high-quality supplement to the hay. When used as a supplement, about 2 hours of grazing time per day works quite well. The advantage of this type of system is the dominant goats do not control the submissive goats like they would when eating from a feed trough. The main disadvantage is that the growth of the forage is weather dependent.

**Energy Supplementation.** The standard high-energy feed that we feed to goats and compare all other feeds against is corn. Corn contains 90 percent TDN but is low in protein (8 to 10 percent). Corn can be fed as a supplement to goats and does not need to be processed when fed as corn alone. Begin the supplementation process in a very gradual manner to avoid acidosis problems. In addition to corn, various commodity feeds work quite well as energy supplements for goats. Soyhulls are readily available in the Southeast and are extremely palatable to goats. They contain less energy than corn, but as a supplement, they result in similar performance. An additional benefit with

**Table 1.** Nutrient Requirements for Various Classes of Goats

Weight, lb	Production Stage	Intake, lb/day	TDN, %	CP, %
66	Maintenance	1.45	55%	7.8%
88	Maintenance	1.76	55%	7.8%
66	Late gestation	3.00	58%	9.8%
88	Late gestation	3.35	58%	9.8%
66	Lactation	3.30	68	11.7
88	Lactation	4.40	68	11.7
40	Growing, ½ lb/day	2.15	58	9.0

soyhulls is that they contain more protein than corn (11 to 12 percent protein). They can be fed in the loose or pellet form.

Whole cottonseed contains abundant amounts of energy and is also a good source of protein. It will typically contain 90 percent TDN and 24 percent crude protein. The limiting factor for its use in goat diets is the fat content, which is approximately 24 percent. In general, mature goats can be fed ½ to ¾ pound per day while young growing goats should be limited to less than ½ pound per day. The seed can be fed on clean sod on a daily or every-other-day basis. Cottonseed is fuzzy and lacks bulk density, which limits handling. Cottonseed will need to be stored in a covered shed or feed bay and not in feed bins. Fuzzy seed will not auger or gravity-flow well. Seed is generally handled with front-end loaders or by hand.

Corn gluten feed is a by-product of making corn starch and corn syrup. It is generally dried and pelleted before being sold. The product is fairly consistent from a particular processing plant but may be quite variable from one plant to another. The crude protein content will be in excess of 18 percent and may be as high as 23 to 24 percent. The TDN content ranges from 80 to 87 percent and the variation is primarily a result of the drying process. If it gets too hot, it results in a lower feed value, palatability problems and usually a darker color.

**Protein Supplementation.** Soybean meal and cottonseed meal are excellent sources of natural protein for goats. Both contain 40 to 45 percent crude protein. Soybean meal is slightly more palatable than cottonseed meal, but both are readily consumed by goats. In the southeastern United States, cottonseed meal is generally cheaper than soybean meal.

**Commercial Feed Supplements.** Numerous commercially produced feeds are available. It is difficult to determine the energy content of these feeds because labeling laws do not require that TDN content be part of the label. Crude protein content must be indicated on the label and also fiber and fat contents are listed. As you make selections for feeding goats, it is generally better to use feeds that contain natural protein versus nonprotein nitrogen or urea. It is important to discuss the particular feed in question with the company representative and get some information on how much energy (TDN) the feed contains.

**Methods of Supplementation.** Anyone who has ever fed goats knows that trying to supplement any sizable herd with a daily allotment of feed is a major endeavor. Invariably, the submissive goats will be underfed and the most dominant goats will be overfed. Always provide as much feeder space as practically possible. Another potential strategy to overcome problems with submissive goats receiving inadequate quantities is to feed twice as much feed every other day. For example, if you were supplementing with 1 pound of feed per day, then feeding 2 pounds every other day would give longer access to the feed and possibly allow the submissive animals to consume more. The most effective way is to allow the nutrition to come from grazing high quality forages.

**Feeding Young, Growing Goats.** The most effective way to get young goats off to a good nutritional start is to begin with creep feeding. Creep feeding allows young kids access to a high-quality feed that the nannies cannot access. This is usually accomplished by placing the feed behind a gate with openings

that the kids can fit through and the nannies cannot. A creep feed should contain 12 to 14 percent crude protein and be extremely palatable. Young goats will typically start consuming appreciable quantities of a creep feed at about 6 weeks of age. If they are not consuming much at this point, the creep feed may need to be relocated or be of better quality to entice them. Once the goats are weaned, continue to feed them a high-quality diet to ensure an adequate rate of growth. Example diets for creep feeding and growing young goats are shown Tables 2 and 3.

**Table 2.** Two Sample Creep Feeds for Goat Kids

Ingredient	Sample 1	Sample 2
Cracked corn	50%	50%
Soybean hulls	30%	----
Oats	----	30%
Soybean meal	15%	15%
Molasses	5%	5%

**Table 3.** Two Sample Diets for Growing Young Kids

Ingredient	Sample 1	Sample 2
Ground hay	25%	----
Cottonseed hulls	----	25%
Cracked corn	44%	41%
Soybean hulls	15%	15%
Soybean meal	10%	13%
Molasses	5%	5%
Trace mineral salt	0.5%	0.5%
Dicalcium phosphate	0.5%	0.5%

## Responsible Drug and Vaccine Use

Diego M. Gimenez, Extension Specialist

There are two classes of drugs: over-the-counter (OTC) and prescription (Rx).

OTC drugs are those that can be purchased anywhere without a veterinarian's prescription. Drugs are labeled for OTC sale when adequate instructions can be printed on the label. If adequate instructions for use cannot be printed on the label, the drug is classified as prescription. Try to list on a drug inventory chart all drugs you currently have on hand.

Rx drugs must carry the following statement on the label, "CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian." Rx drugs are only available from a veterinarian or pharmacist. Any time you use animal health products, even if OTC, it is recommended that you first talk with your veterinarian. The margin of safety for the animal (especially if an accidental overdose should occur), the difficulty in correctly diagnosing the disease and the safety level for the person administering the drug all are factors that determine whether a drug is available over the counter or by prescription. Every drug approved for use in livestock has labeled instructions. OTC drug labels will have exact printed instructions on dosage, administration, withdrawal times and handling. If your

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veterinarian prescribes a drug for your animal, he or she will give you a form describing uses, dosage, administration and withdrawal times.

## Drug Usage

There are right and wrong ways to use OTC and Rx drugs.

- Label use is when you use the animal health product exactly as it says on the label. This is the acceptable and legal way producers use most drugs.
- Off label use is when producers, on their own, use a drug in a manner other than what is on the label. This is illegal.
- Extra label use is when a veterinarian prescribes a drug to be used in a manner other than the directions on the label. A veterinarian-client-patient relationship must exist before extra-label drug use is legal.

Feed medication can only be used as directed by the label. It is illegal for a producer or veterinarian to feed medication other than according to the label.

## Calendar of Events

### October

- 3 to 12 Alabama National Fair,  
Montgomery
- 4 Kidding and Lambing Workshop  
for Small Ruminant Producers,  
Lauderdale County Cooperative  
Extension Office, 1 to 4 p.m.  
Contact Robert Spencer at  
(256) 766-6223
- 4 4-H and FFA Fayette District Dairy Show, Fayette
- 18 Wiregrass Forage-Based Bull Evaluation and  
BCIA Heifer Sale, Elba, 12 noon

### November

- 1 Animal Evaluation Workshop for Goat Producers,  
Tennessee Valley Research & Extension Center,  
Belle Mina, 1 to 4 p.m. Contact Robert Spencer at  
(256) 766-6223
- 14 BCIA Fall Round Up Bull and BCIA Genetic  
Verified Heifer Sale, Uniontown, 11 a.m.

### December

- 13 North Alabama Bull Evaluation and BCIA Heifer  
Sale, Cullman, 11 a.m.  
Contacts: Gerry Thompson, Michelle Elmore,  
Kent Stanford
- TBD 4-H Horsemanship Clinic, Auburn

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