



## Designing a Controlled Grazing System for Goats

By Jackie Nix

I was recently asked what is the single most important aspect of goat nutrition in my opinion, to which I immediately replied – adequate amounts of quality forages in the diet. Not only are goats brilliantly designed to convert forages into meat, milk and mohair; but also maximizing the amounts of quality forages in the diet will reduce production costs and improve your bottom line. One of the most efficient ways to maximize the use of forages is to set up a controlled grazing system. Here are a few tips on designing a controlled grazing system for your farm.

Select plants adapted for year-round grazing. Develop a perennial system based on warm-season (20 to 30% of land area) and cool-season (70 to 80%) forage species that are productive and persistent for your soils, climate and management. If you are unsure what forage species are best adapted to your local soils and climate, seek out advice from local authorities in the Department of Agriculture, Cooperative Extension Service or National Resources Conservation Service. You can find contact information for each in the phone book or on the web.

**Minimize land dedicated only to hay making.** Making hay of surplus growth from grazing paddocks can help in weed and parasite control, but hay-only fields reduce management flexibility because these fields are off limits to grazing animals.

**Use lime and fertilizer wisely.** Yields of pasture plants are directly related to nutrients supplied by the soil, fertilizers and lime. Controlled rotational grazing will provide a uniform grazing pattern that will help to recycle nutrients from urine and manure. From 75 to 85% of the nutrients consumed are excreted back on to pastures by grazing animals.

**Manage for green leaves.** Young, green leaves are 70-80% digestible, while brown leaves and mature seedheads are only 30-40% digestible. Graze animals with high nutritional needs (ie. weaned kids, growing doelings, lactating does) on leafy, vegetative paddocks. Graze those with low requirements (dry, pregnant does and bucks) on paddocks with more stemmy and mature forages. Clip or mow pastures to regenerate new vegetative growth only when they cannot be grazed or harvested for hay or silage.

**Subdivide your fields and cross fence to control the grazing pattern.** Create 10 to 20 permanent pastures, separating based on plant species present, exposure, etc. Use electric power fences, keeping in mind that perimeter fences must be substantial enough to keep animals in even if power fails. Use internal cross fencing to ration forage. In many cases one or two temporary electric wires will be sufficient. Use of reels, tread-in posts, polywire or polytape can help reduce fencing costs.

**Graze each area rapidly.** Put enough animals on a paddock to graze the intended area to the desired stubble height in 1 to 3 days. A high stock density, equivalent to 20,000 to 70,000 pounds of live weight per acre is usually needed to reduce wasted forage and obtain uniform grazing.

**Anticipate changes in pasture growth.** If pastures accumulate more than 8 to 10 inches of growth, take paddocks out of the grazing rotation and harvest for hay or silage at the correct stage of maturity. Offer

supplemental feed if forage supply is limited. Use temporary electric wire to ration tall fescue that has grown during autumn.

**Provide a sacrifice area.** A sacrifice area is often a drylot, woodlot, or pasture scheduled for renovation. A sacrifice area may be permanent. Keep animals in a sacrifice area when pastures are extremely wet or when growth is insufficient to permit grazing. Provide shade and water in the sacrifice area and use the area for supplemental feeding, thereby reducing treading damage or severe overgrazing. Plant growth in the sacrifice area will be severely damaged or eliminated altogether.

**Be flexible.** Be prepared to make adjustments in your grazing or feeding program because pasture growth rates and animal requirements are continually changing. Let rate of grass growth and the amount of forage present determine when a paddock is to be regrazed. The rule of thumb is when grass is growing fast, use a short rotational grazing cycle (12 to 20 days) and harvest surplus as hay or silage. When growth is slow, use a long cycle (30 to 60 days or more) and feed supplemental feed or hay if needed.

**Provide quality free choice minerals at all times.** Even though forage quality may be excellent, it is very unlikely that your pastures will provide optimum levels of all of the minerals and vitamins needed by goats for efficient production. Many soil types are deficient in phosphorus, copper, selenium and zinc. If a nutrient is not present in the soil, the plant cannot provide it to the goats. Other deficiencies may also occur due to plant factors, and the presence of antagonistic minerals. Provide a high quality free choice mineral supplement (such as the *Sweetlix 16:8 Meat Maker mineral supplement*) in areas where goats congregate (usually near watering or loafing areas) in an adequate number of mineral feeders (at least 1 per 10 head). PVC pipe mineral feeders work well for this purpose.

**Be sure to keep your deworming program up to date.** While rotational grazing will help you to maximize utilization of forages, the quick rotation schedules and short grazing canopies in the paddocks can actually enhance transmission of internal parasites within your herd. Develop a deworming program with your veterinarian or drug vendor that will counteract these potential negative effects.

**Get started!** Begin by using only part of the herd or a small acreage. You can expand after you have gained experience with the management system. Keep your stocking rate the same, but subdivide your pastures and plan your management to allow forages in each paddock to be grazed in 1 to 3 days. Keep records of the amount of surplus forage harvested, the number of days each pasture is grazed, sequence and length of each rotational grazing cycle and your seasonal animal performance.

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April 2002