AGR-264

Improving Kentucky Small Ruminant Pastures

University of Kentucky
College of Agriculture, Food and Environment
Cooperative Extension Service

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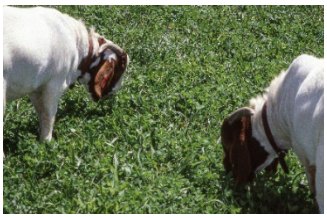


Well-managed pastures can provide a nutritious and inexpensive feed source.

Pastures should be soil sampled to a depth of 3 to 4 inches using a soil probe.

Inexpensive sprayers can be attached to ATVs or golf carts to apply herbicides on small pastures.

Pasture Management

For many small ruminants, quality pasture can provide almost all nutrients needed for maintenance or light work for much of the year. Pasture reduces the cost of keeping livestock while minimizing impacts on the environment. Below are some guidelines for improving pastures.

Plan to utilize spring and fall pasture growth. Kentucky pastures are dominated by cool season species such as tall fescue, Kentucky bluegrass, orchardgrass and white clover. These species grow rapidly in the spring and fall. Design grazing plans to utilize this natural flush of growth.

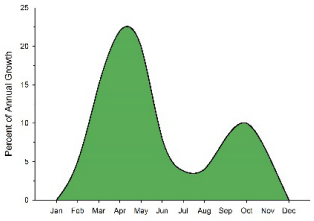
Soil sample every 2 to 3 years. Soil nutrients play a key role in pasture productivity and persistence. Soil tests recommend additions of phosphorus (P), potassium (K) and lime (adjusts pH) based on what is needed.

Apply fertilizer strategically. Apply fertilizer using a current soil test as a guide. Applying needed nutrients will boost yield and keep forage stands productive and competitive with invasive weeds.

Control weeds that limit pasture productivity. Successful weed control includes identifying major weeds, selecting herbicides that are proven to control those weeds and applying at the correct time of year for the targeted species. A thick stand of desirable forages improves long term weed control. Always follow the herbicide label.

Overseed thin stands to increase available forage. Fall overseeding of pastures can fill in bare areas left by heavy grazing or aggressive weed control programs. Mow pastures close before drilling seed into the sod. Seed should be placed ¼ to ½ inch deep and should be well established (usually 4 to 6 inches in height) before grazing. Using an improved variety adapted for the area is well worth the investment.

Re-establish poor pastures. When desirable forages make up less than half a pasture, complete re-establishment may be needed. Two killing sprays with a non-selective herbicide 4 to 6 weeks apart will be required to remove all undesirable species followed by fall seeding. Pastures can be grazed late the following spring once grasses are well established.



Cool-season grasses grow best in the spring and fall; summer growth is limited by high temperatures.

Apply fertilizer strategically using a current soil test as a guide.

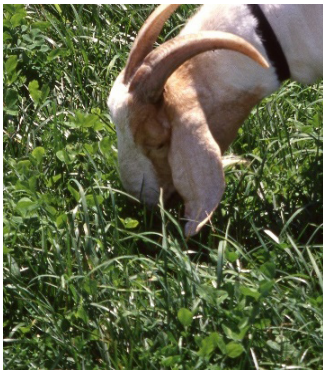
Use rotation and clipping to manage internal parasites. Rotationally graze pastures leaving at least 4 inches of residual to prevent re-infestation of small ruminants with internal parasites. Removing a cutting of hay will also reduce the parasite load in fields.

Buttercup, a prolific reseeding annual or perennial. Control in late winter, before flowers are visible.

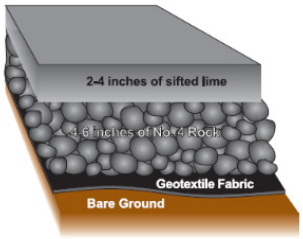
Horsenettle, a warm-season perennial. Controlled in late summer.

Common ragweed, a warm season annual. Controlled in summer with herbicides or aggressive mowing.

Plantain, a cool season perennial. Edible, but limited yield, best controlled in fall or spring.



Thick, vigorous pasture stands will suppress weeds, intercept rainfall and keep plant crowns and soil cooler.



Heavy use areas are constructed by placing geotextile fabric under crushed stone and dense grade aggregate. These areas provide a dry place for feeding or loafing during wet weather or when pasture is limited.

Fall stockpiled tall fescue can extend the grazing season with high-quality pasture.

Grazing Management

While improving pastures can significantly improve forage production, changes in grazing management are often needed to maintain improvements long term.

Consider the stocking rate. On average, one acre of productive pasture will support two mature ewes or goats for the year. Higher stocking rates may result in overgrazing of desirable grasses, high weed populations and bare areas. If land area is inadequate, consider limiting grazing by confining small ruminants to stalls or sacrifice areas especially during periods of slow or no forage growth.

Implement rotational grazing. Rotating stock from one pasture to another gives pastures time to rest. Rotations can be as simple as two pastures rested 2 to 4 weeks or as complicated as weekly rotations as dictated by plant growth. Rotations can help manage internal parasite loads in small ruminants.

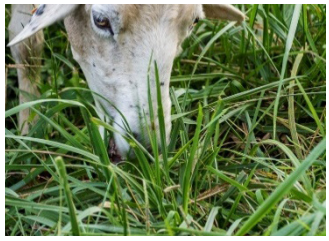
Designate sacrifice areas. Even well-managed pastures do not grow during the winter months. During such times, keeping small ruminants in designated sacrifice areas will protect pastures from overgrazing. In some cases, these areas can be improved by installing heavy use pads.

Install heavy use pads. Cover is hard to maintain in high-traffic areas such as around water, shade, and feeding areas. Installation of geotextile fabric with crushed stone and dense grade aggregate provides permeable, dry footing for small ruminants and caregivers year around with minimal upkeep.

Manage toxic tall fescue. Naturally occurring tall fescue is often infected with a toxic endophyte that can hinder breeding, milk production or gain in sheep and goats. Dilution with legumes, minimizing seedheads, and replacement of some acres with non-toxic tall fescue or other desirable forages will help manage the effects of toxic tall fescue.

Provide high-quality forage at key times. Large amounts of high-quality forage are needed at critical production times like flushing breeding animals, lactation or fattening young stock. The use of summer and winter annuals can help in these periods.

Use legumes strategically. Legumes add yield and nutritive quality to small ruminant pastures in addition to fixing nitrogen that will cycle through the animals and back to the soil. Legume pasture can be very beneficial for young stock after weaning or during lactation. High-legume pastures can sometime suppress estrus due to phytoestrogens.



Close and frequent grazing weakens sods, lowers yield, increases weed invasion and increases ingestion of internal parasites.

Electric fence is an effective and inexpensive way to begin rotational grazing.

Endophyte infected tall fescue can cause heat stress, reduced milk production and lower gains in small ruminants especially in late spring and summer.

Additional Resources

UK Cooperative Extenson Service. Extension offices can be found in every county of the Commonwealth. Visit http://extension.ca.uky.edu/county to find your county office or call (859) 257-4302.

UK Forage Extension. Information and educational events on pastures and forage production can be found at https://forages.ca.uky.edu/.

UK Weed Science. Publication and resources on weed control can be found at http://weedscience.ca.uky.edu/forages.

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