

Decrease Feed Costs Through Increased Pasture Production

By Melanie Barkley
PSU Extension Educator

As our production costs continue to climb, sheep producers are looking at ways to become more efficient in feeding their sheep. While that statement would be considered a “no-brainer,” a look at the basics of pasture production should help us achieve that goal.

As an Extension Educator, I spend a lot of time recommending soil testing. It still amazes me that folks will practice any kind of fertility program without first checking their soil to find out what nutrients it is lacking. At the top of the list for soil fertility issues is the soil pH. As the pH of the soil moves further away from the neutral zone of 7.0, some nutrients become unavailable to the pasture plants. Thus, if the plants can't use the nutrients we add to the soil, the plants won't grow as well as they could. Nutrients such as manganese and aluminum become more soluble in the soil when soil pH approaches 5.0 and can be present in high enough amounts to be toxic to alfalfa and clovers. This obviously translates into less pasture production to feed the sheep.

The challenge to maintaining pasture fertility comes when we look at how to meet the nutrient needs of our plants, but still keep some money in our pocket. For nutrients, I look to ways to “grow my own.” One of the rules of thumb for pastures has been to keep about 30% of your pasture as a legume. This will provide the needed nitrogen for your grasses and still maintain your pasture at about that percentage of legumes. But, the soil pH must be near that 7.0 level in order for the nodule-forming bacteria on legumes to produce the needed nitrogen. You may still need to add phosphorus and potassium and possibly some other nutrients to maintain the best balance for plant growth.

Next on my list would be management related issues. Start with looking at the type of forages that are growing in your pastures and manage them to prevent stressing or weakening the plants. Some forages can be grazed low to the ground without any adverse affects. Other plants need to be grazed at higher levels. For most cool season forages, move sheep out of a field before the height reaches 3 inches. This manages the plants and serves as a control measure for internal parasites. Some of the warm season grasses will need rotated out when they are 6 inches tall.

As we move through the fall grazing season, don't forget about overwintering heights. Warm season grasses such as switchgrass and big bluestem should be at least 12 inches tall for the winter. Fescue and orchardgrass should go into the winter at five to six inches in height, clover pastures at five inches, and bluegrass pastures at three inches. I would also use caution with red clover because of the estrogenic effects it can have on sheep.

Another consideration for fall is to look the variety of species growing in the pastures. Are there weed problems that should be addressed? Chemical controls can work very well in the fall of the year because products are moved rapidly from the leaf area to the roots because plants are starting to store energy reserves for the coming winter.

Are there other forages that you would like to introduce into your pastures? Fall can be a great time to introduce a new species by no-tilling into the existing sod. You may want to overgraze a bit before seeding the fields to decrease competition with the existing plants in the field. The following year the pasture should be grazed to proper heights so that the new seedlings can compete better with the established forages. Be sure to avoid over grazing so the new seedlings aren't stressed or weakened.

New forage species can also be frost seeded into pastures during late winter. This works well for legume species such as white clover. This is a process where the seeds are broadcast early in the morning after a hard frost. The sun warms the soil during the day and the frozen “honeycomb” that developed the night before slowly closes over the seeds. Grass seeds are normally too light and fluffy for frost seeding. The soil doesn't cover them over as well as the legume seeds and thus they don't germinate as well.

A leisurely walk through your pastures can be time well spent when you evaluate the forage

production and consider how those forages can save you money feeding your sheep. For information on forage species appropriate for your pastures or for information on soil testing procedures, contact your local Cooperative Extension office.