# AG NOTES

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**CLARIFICATION**

Let me make it official. After some confusion, the farm equipment sale scheduled for February 27 will be held at the Bedford County Ag Center as planned. Equipment will be received Tuesday through Friday, February 23-26.

For more information, contact Bob Morton at 931-842-1234.

**LEGUMES**

There are a lot of pastures in or area that are in poor shape. Overgrazed, poor quality grasses, low fertility, and full of weeds describe most of the rough ones. How can they be improved? Dr. Gary Bates, forage specialist with UT Extension, prepared a publication titled 'Renovation-Plant Clovers in Grass Pastures', number SP 435-A. I'll share some of it here with some slight modification.

A goal of cattle producers should be to provide the nutrients their cattle require as economically as possible. Allowing the cattle to acquire their own feed through grazing is the most efficient way to provide these nutrients.

The majority of cattle in Tennessee graze tall fescue or orchardgrass pastures. While these pastures provide good quality forage over a long portion of the year, they can be improved. One of the best and easiest ways for improvement is to add legumes such as red or white clover and annual lespedeza to these pastures.

Adding clovers to pastures or hay fields can produce benefits in four ways: increased yield, improved animal performance, nitrogen fixation and more summer production. Here's how.

Research in Tennessee has shown that tall fescue overseeded with white clover, or a combination of white clover, red clover and annual lespedeza, will produce more forage than a pure tall fescue pasture fertilized with 60 pounds of nitrogen per acre. The nitrogen fixed by legumes into the soil profile feeds the other grasses. If at least 30 percent of the ground area in a pasture is covered by clover, there will be no need to apply any nitrogen in the spring. If nitrogen costs 25 cents per pound, this would be a savings of 15 dollars per acre each year.

Also, research has shown that clovers improve animal gains and conception rates. High quality feed is important for a calf to gain well and for a cow to rebreed after calving. Clovers are more digestible and contain more nutrients than grasses. Their presence in a pasture improves the palatability of the forage, which will increase the amount and quality of the forage the animal consumes.

Other research has shown that including clovers in an endophyte-infected tall fescue pasture helps decrease fescue toxicosis. The result is an increase in weaning weights, milk production and conception rates.

The majority of the growth from cool-season grasses such as tall fescue and orchardgrass occurs during the spring and fall. During the summer, high temperatures and drought cause these grasses to slow or stop production. Several legumes such as red clover and annual lespedeza can extend the grazing season and provide high quality pasture that is otherwise unavailable during this summer forage slump with pure tall fescue or orchardgrass pastures.

The steps for renovation are fairly simple. It starts with removing excess pasture growth prior to renovation. This is best done by grazing down to a 1-inch stubble in late fall or winter. Removing the excess forage will help ensure the legume seeds will come in contact with the soil.

Fertilize and lime according to soil test. Legumes require a higher soil pH and fertility level than do grasses. Fertilizing by soil test will ensure that legume establishment will not be limited by low pH, potash or phosphate levels. Don't' apply nitrogen. Nitrogen will stimulate grass growth, thereby increasing the competition with the legume seedlings.

The major legumes used in grass hay fields and pastures in Tennessee are white clover, red clover and annual lespedeza. White clover is the most tolerant of grazing. Red clover provides greater forage yields and will be productive later into the summer than white clover. Annual lespedeza will provide more production during mid to late summer, especially on droughty hillsides.

Be sure to plant certified seed of a recommended variety. Using certified seed is the only way to be sure of what you are planting. Use recommended varieties. Be sure to inoculate the seed with the proper *Rhizobium* bacteria, or purchase pre-inoculated seed. This will ensure that the bacteria needed for nitrogen fixation are present during seed germination and seedling development.

Plant the seed February 20 to March 31, making sure the seed makes good contact with the soil. The seed is dependent upon moisture from the soil for germination and establishment. Good seed-to-soil contact is essential for obtaining a strong legume stand.

There are several methods of planting. A simple but effective method is to broadcast the seed during the last two weeks of February. As the soil freezes and thaws, the seed will be worked into the ground. Allowing cattle to trample the seeds into the ground will help ensure the seeds are covered. If the grass sod is thick, it may be necessary to use a disk to open areas for the seeds to contact the soil and become established. Use the disk to disturb about 50 percent of the sod. Not only will this improve seed-to-soil contact, but will also help reduce the competition from grasses. Drill or broadcast the seed after disking.

There are several other details in this publication. For a link to it go to utcrops.com or contact me and I'll get you the link. This is the time to determine if this is something to add to your farming program.

I will add that if you have a severe weed program and intend to spray for weeds this spring or summer, you will want to delay renovation until you have cleaned up the weed problem. The broadleaf weed control products will also kill the legumes.