

QUESTIONS

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Many interesting questions come from livestock producers each week via letter, phone, and e-mail. Some are easy to answer while for others it is necessary to check files of information, books, or contact specialists in other states. Sometimes there is no good answer, indicating that we need research on that subject. This month, I've included some good questions that may be of interest.

Some of my cows ate a viny plant with yellow flowers during March, got sick, and nearly died. Why, and what can I do in the future?

The viny plant is yellow jessamine with fragrant yellow flowers which grows widely in the Coastal Plain and Piedmont of Georgia. It contains two alkaloids, gelsemine and gelsemoidine, which will cause weakness, slow breathing, convulsions, and may result in death of the animal. Normally, cattle do not consume this vine if they have adequate pasture or hay. However, when perennial pastures are very short in winter or early spring and little or no hay is being fed, cattle will eat large amounts of yellow jessamine. The solution is to have adequate hay available to cattle when pastures are short.

Will it hurt my clover if I apply nitrogen to tall fescue-clover pasture?

This depends on your management. Nitrogen applied in the autumn or February will stimulate early grass growth before clover growth begins. If the pasture is adequately grazed to utilize the grass, the clover should come on strong during the spring period. If the pasture is undergrazed, the tall fescue will shade out the clover. Nitrogen applied at the correct time can enhance winter grass growth and not adversely affect clover stands and production.

I've seen some great ads for "Worldfeeder" bermudagrass. Is it a good and should I plant it?

Worldfeeder bermudagrass, sold by a company in Oklahoma, is claimed to be much higher yielding and have better quality than other bermudagrasses. The price is high - the last quote I had was

\$375 for 6 bushels of sprigs. We have not had Worldfeeder in our bermudagrass trials but 3-year results at the Texas A&M Research Center, Overton, in the humid area of east Texas are not encouraging. Forage yields of Worldfeeder have been 20 to 25% lower than Coastal bermudagrass. Worldfeeder appeared to be more sensitive to drought on deep sandy soils. Worldfeeder was shorter and more leafy than Coastal, resulting in the forage being somewhat more digestible and higher in protein. For beef cattle production, it makes little sense to pay such a high price for sprigs to plant a grass that will yield less than Coastal bermudagrass.

Two of my mares grazing tall fescue failed to produce milk for the foals. What can I do?

Mares grazing endophyte-infected tall fescue, particularly during the last 3 months before foaling, are likely to produce little or no milk. In addition, infected tall fescue often causes abortions, difficult births, and foal deaths. To eliminate the problem in the future, mares should be removed from endophyte-infected tall fescue 2 to 3 months prior to foaling. Dilution of infected tall fescue pastures with clover greatly reduces the toxicity problem with cattle but this is not effective with horses. Research at Clemson University showed that a high rate of foal deaths occurred where mares grazing infected tall fescue were receiving 50% of their energy requirements from supplemental feed. Thus, the only dependable solution is to graze mares on another grass such as ryegrass, bermudagrass, orchardgrass, or replant pastures to endophyte-free tall fescue.

My cows eat leaves on willow trees even with plenty of grass in the pasture. Do the willow leaves have any nutritional value?

The cows may be doing a smart thing if your pasture quality is poor. Research in New Zealand has shown that willow leaves are highly nutritious with 20% crude protein and 68% digestibility, which is higher in protein and energy than most tall fescue or bermudagrass pastures.

Is it safe to graze johnsongrass after a killing frost?

Naturally occurring glycosides in johnsongrass are converted to prussic acid (HCN) immediately after a killing frost. Animals consuming the grass are affected by rapid breathing and muscle spasms, often within 15 minutes, and eventually die. Animals should be immediately removed from johnsongrass after a killing frost. Frosted johnsongrass is safe to graze after one week.

Should I buy and plant Red River crabgrass seed in my pastures?

"Red River" is a variety of crabgrass marketed by the Noble Foundation in Oklahoma. It does not appear to be greatly different from the common crabgrass growing in Georgia. However, if crabgrass seed are desired for planting, then this is a seed source. Most pastures in Georgia are amply supplied with seed banks of common crabgrass and should not need any additional seed. Generally, if fertility and soil moisture are adequate, crabgrass growth should be ample. Crabgrass is highly responsive to nitrogen fertilizer. Yields will be low under low fertility. Nutritive quality is good and superior to bermudagrass. Crude protein content is highest in early summer and declines during August and September as more stems appear. Generally, adequate fertilization of pastures will encourage crabgrass if moisture is adequate.

Why do bahiagrass pastures continue to grow and produce grass year after year with no application of nitrogen fertilizer?

The usual answer that cattle are recycling nitrogen through urine is not valid as a high percentage of the nitrogen is lost as ammonia by volatilization with the rest being concentrated into urine spots. However, there are several other sources of nitrogen for the bahiagrass. Thunderstorms supply small amounts of nitrogen. Free-living bacteria in the soil, Azotobacter and Clostridium, also fix nitrogen from the air which becomes available in small amounts to the grass. Under wet conditions, blue-green algae also fix nitrogen. Symbiotic nitrogen-

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fixing bacteria, *Spirillum lipoferum*, live in the cortical outer tissues of bahiagrass roots. The amount fixed is low, 15 to 20 lb N/acre/year, but it all becomes available to the plant. Together, all these sources of nitrogen are sufficient to maintain a low but continuing level of production.

What pasture plants can I grow on wet or poorly drained land?

Of the warm season grasses, johnsongrass and dallisgrass are the most productive and best adapted under these conditions. Bahiagrass also does well on poorly drained soil. The best cool season grass adapted to poorly drained soil is annual ryegrass. Tall fescue is reasonably tolerant of wet conditions. Of the legumes, the winter annual, ball clover, is the most tolerant of wet soil. Other clovers with reasonably good tolerance are white or ladino clover, berseem, and subterranean clovers.



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