THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION
Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

Rome Ethredge, CEC
207 E. Crawford St.
Donalsonville, GA 39845
Phone: 229-524-232
Fax: 524-2856
e-mail:ethredge@uga.edu

Seminole Crop News

Question of The Week Sword Bean

November 16, 2011

The large bean in question last week was a Sword Bean, *Canavalia gladiata*. A very large bean closely related to a Jack Bean, (as in Jack and the Beanstalk). They can be eaten but it's reported that they may be slightly toxic if eaten in large quantities. They're grown for fun mostly.

I see them for sale on the internet with messages printed on them they are so large.

This week I'm asking about these trees we saw near Lakeland Georgia on a tour last week. What is new Thomas County Agent, Andrew Sawyer, looking at here?

Governor's Agricultural Environmental Stewardship Award

November 16, 2011

Governor Nathan Deal and Commissioner of Agriculture Gary Black issues call for nominations for the Seventh Annual Environmental Stewardship Award. The Governor's Agricultural Environmental Stewardship Award is an annual award designed to recognize agricultural producers in five districts of the State that are exceptional environmental stewards. This award recognizes producers that have incorporated conservation practices and best management practices into the day-to-day activities of their farming operations that protect and conserve the natural resources of the state. A five-member selection committee comprised of representatives from each region will select a winner from each of the five regions. A Statewide winner will be selected following a tour of each of the operations selected as regional/district winners. At the Ninth Annual Agriculture Week Kick-Off Festivities that will be held on Tuesday, March 13, 2012, Governor Nathan Deal and Department of Agriculture Commissioner Gary Black will recognize all district winners and announce the State winner.

Applications are available at

http://agribusiness.georgiainnovation.org/

and are due by December 16, 2011.

For more information, contact: Steven Meeks at 912-207-0813 or Sarah Cook at (229) 391-6882 or

smcook@uga.edu

Wheat Preplant Fertilization

November 14, 2011

I've been asked today about fertilizing ahead of wheat planting. Your preplant fertilizer will depend a lot on what was just harvested from the field where you will be planting wheat for grain. Here are the amounts of Nitrogen you will need based on crops just harvested.

Cotton: 35 to 40 lbs. ac

Corn: 30 to 35 lbs. ac

Fallow: 25 to 30 lbs. ac

Soybeans: 15 to 20 lbs. ac

Peanuts: 0 to 15 lbs. ac

Tillers produced in the fall generally produce the most grain per unit area. It is important though, not to over-fertilize with nitrogen in the fall as it may cause excessive growth and result in winter injury.

Your total Nitrogen will be between 100 and 130 pounds per acre but we will need most of it in Jan and February as one or two side dressings, depending on tillering.

Timing of N fertilization should be based on the pattern of uptake by the crop. Demand for N is relatively low in the fall but increases rapidly in the spring just prior to stem elongation. Therefore, make the fall applications of nitrogen at planting, and the remaining N prior to stem elongation (Zadoks 30). Use the lower rate of fall applied nitrogen at planting on heavier-textured soils and the higher rate on sandy soils.

Other nutrients should be applied according to a soil test pre-plant.

Since 65% of the total P uptake and 90% of the total K uptake occurs before the boot stage, these nutrients should be applied according to soil test before planting and thoroughly incorporated into the rooting zone.

Some of this information is taken from the 2011-2012 Georgia Wheat Production Guide and the complete guide can be accessed at this link.

http://www.caes.uga.edu/commodities/fieldcrops/gagrains/wheat.html

Corn Yield Reports 2011

November 14, 2011

The Georgia 2011 Corn Performance Report (Annual Publication 101-3)

is now available on the Statewide Variety Testing web site:

www.swvt.uga.edu

Frosted Sorghum

November 14, 2011

Members of the Sorghum family are often used for forage in Georgia. These warm season grasses are of African origin. These grasses may contain toxic levels of nitrates and prussic acid under stress conditions (drought, frost/freeze, etc.). As such, they are not preferred choices for grazing or hay production (unless irrigated). Sorghums are generally more difficult to cure for hay than pearl millet or other summer annual forage crops. Therefore, they are best adapted to use as a silage crop. The ensiling process results in the dissipation or breakdown of prussic acid and high nitrate levels after 2 – 3 weeks, reducing the toxicity problem for livestock.

In addition to the potential for prussic acid toxicity, some have reported the presence of an unidentified toxin in sorghum, particularly in sorghum x sudangrass hybrids. This toxin or factor appears to cause spinal cord degeneration and, in extreme cases, paralysis in horses (sorghum cystitis ataxia syndrome). The potential for this problem and the lack of an effective treatment or cure for this syndrome has led to a general recommendation that horses should NOT be fed forage from the sorghum family.

Prussic acid or hydrocyanide is formed in certain plant species during water stress or frost conditions. Under normal growing conditions, these plants produce a nontoxic substance called dhurrin. When plants are injured by frost or wilting, enzymes come into contact with dhurrin and liberate toxic prussic acid. Concentrations of prussic acid can also be high in young, rapidly growing tillers.

Here's some Grazing Sorghum on Friday before the frost on Saturday morning. The cattleman took the cows off and will keep them out for several days to make sure prussic acid isn't a problem for them..

Plants in the sorghum family are susceptible to prussic acid formation and include johnsongrass, sudangrass, sorghum and sorghum-sudan hybrids. Wilted wild cherry leaves can also contain lethal amounts of prussic acid. Unlike sorghums, pearl millet does not produce prussic acid (but does accumulate nitrates) and can be safely grazed following a frost.

Prussic acid is most concentrated in young leafy tissue which is also the plant part preferentially selected by grazing animals. Therefore, unlike nitrate toxicity, grazing pastures lightly to reduce toxin intake is unlikely to succeed.

Toxic mechanism

Prussic acid is lethal to animals because it interferes with the animal cell's ability to generate energy. This ultimately results in death. Simply put, cyanide prevents oxygen transfer from the blood and animals suffocate at the cellular level. Because blood from prussic acid poisoned animals does not release oxygen, venous blood is normally a bright cherry red color

when a postmortem examination is performed. This is a good indicator that prussic acid poisoning has occurred.

Prussic acid poisoning occurs rapidly. The time from ingestion of toxic forages to death is usually short with animal losses sometimes occurring within 10 to 15 minutes of grazing affected pastures. Typical animal symptoms include excessive salivation, rapid breathing, and muscle spasms. Because the tissues cannot receive oxygen, mucous membranes often have a purplish color. Animals are occasionally observed staggering through the pasture before collapse and death. Successful treatment is almost impossible because of the rapid progression of symptoms. Animals must be removed from toxic pastures immediately. Preventative management is the only reliable method to avoid animal losses.

Management

There are indications that adequate soil phosphorus can decrease the potential for prussic acid formation. Conversely, heavy nitrogen fertilization may increase hydrocyanic acid content. It is important to soil test fields and follow fertility management recommendations to ensure appropriate nutrients are present for plant growth. Excessive nitrogen applications should be avoided to decrease the probability of toxic nitrate and prussic acid levels.

Do not allow cattle access to susceptible plant species immediately following a drought ending rain. Rapidly growing young plant tissue can contain toxic levels of prussic acid for 7-10 days. Frost damaged plants also can contain high levels of prussic acid. Grazing in frosted fields should also be avoided for at least a week. Use extreme caution when grazing frosted fields as stands are often not completely killed. New tillers or surviving tillers following a frost can be highly toxic and should also be avoided for 1-2 weeks.

Cured hay harvested from frost or drought stressed pastures will not contain toxic amounts of prussic acid as the concentration will deteriorate by the time of baling. Silage should also be safe for feeding after the ensiling process is complete (approximately 3 weeks). Remember, nitrate toxicity is different than prussic acid poisoning. Unlike prussic acid, toxic levels of nitrate will remain in hay and do not diminish over time.

Testing for nitrates is critical to ensure safe hay feeding, especially following the dry weather of this year. Remove wild cherry trees from pastures or minimize animal exposure to them by fencing off wooded areas. Examine areas containing cherry trees immediately following storms; particularly when forage is in short supply as animals will be more likely to consume the leaves.

Information taken from www.georgiaforages.com website.

Later,

Rome