SALINE COUNTY ROUND UP
November/December 2016

Upcoming Events:
Saline Co. Cattleman’s Meeting/Annual Pie Auction – Thurs., Dec. 8, 6:30pm

Pesticide Applicator Training Schedule
$10 Fee - No Reservations Required
Tues., Dec. 13, 1:00pm
Tues., Jan. 10, 6:00PM
Tues., Feb. 14, 1:00pm
Tues., March 14, 1:00pm
Tues., April 11, 6:00pm

PRUSSIC ACID POISONING

Hydrocyanic acid (HCN) or Prussic acid is generally found in stressed plants and is formed by enzymatic action on compounds call the cyanogenetic glucosides (dhurrin) when growth is adversely affected. When growth is depressed by adverse environmental conditions, such as moisture stress or frost, the enzymatic action may take place producing prussic acid.

Susceptible Plants
The amount of HCN found in plant tissue varies among species. Of all the plants grown in Arkansas, those belonging to the sorghum category are most likely to contain potentially toxic levels. Grain sorghum contains the most, followed by johnsongrass, sorghum-sudan hybrids and then pure sudangrass. However, johnsongrass may be the plant of most concern since it grows wild throughout the state and infests many areas that are grazed. Close grazing for several years usually eliminates johnsongrass from pastures. Millet is free of the toxin. HCN may be produced by a few other plant species. Wild cherry trees can produce toxic levels, and HCN poisoning occurs most often when animals consume wilted leaves after trees have been damaged by storms or pruning. Immature plants and regrowth following haying or grazing contain the gighest levels. Drought and frost are closely associated with high levels of HCN.
Susceptible Animals

Ruminant animals (cattle, sheep, and goats) appear to be the most susceptible to prussic acid poisoning. Reports of poisoning in swine and horses are rare.

Although HCN is not often a problem in horses, feeding sorghum-type forage may produce a malady known as cystitis syndrome. The exact cause of the disease is not known. Affected horses exhibit position incoordination, urine dribbling, and abortion in pregnant mares. Horses should not be grazed on johnsongrass, sudan, or sorghum-sudan species.

Symptoms of Poisoning

Symptoms of prussic acid poisoning include anxiety, progressive weakness, and labored breathing, and death may follow when lethal amounts of HCN are consumed. However, the dead animals may be found without visible symptoms of poisoning. Animals may also show increased rate of respiration, and convulsions. Death often occurs rapidly in affected animals.

Precautions for Using Sorghums or Johnsongrass

* Do not allow animals to graze fields with succulent, young, short growth. Graze only after plants reach a height of 18 to 24 inches.

* Do not graze drought-damaged plants in any form, regardless of height, within four days following a good rain. It is during this period of rapid growth that accumulation of HCN in the young tissue and of nitrates in the stems is most likely to occur.

* Do not graze wilted plants or plants with young regrowth. Do not rely on drought-damaged material as the only source of feed. Keep either dry forage or green chop from other crops available at all times. Uneven growth as a result of drought can best be utilized as silage or hay.

* Do not use frost damaged sorghum as pasture or green chop during the first seven days after the first killing frost. Delay pasturing for at least seven days or until the frosted material is completely dried out and brown colored. Do not rely on frosted material as the only source of feed. Do not graze at night when frost is likely.

* Do not turn hungry cattle onto a pasture of sorghum, sorghum-sudan hybrid or johnsongrass. Fill them up on hay or other forage first, and begin grazing in the late afternoon.

* An option for using potentially toxic forage is to harvest it as hay or silage. Prussic acid levels decline in stored forages. Well cured hay is safe to feed, and if forage likely to have high prussic acid is ensiled, it is usually safe to feed three weeks after silo fill.

I don’t usually stress nitrate poisoning because we seldom apply high enough levels of nitrogen to cause high nitrate levels.
Oaks, Acorns, and Cattle – Beware

Short pastures, oak trees, and a good acorn crop may add up to potential losses due to acorn poisoning in the cow herd. Poisoning has been associated with the high tannic acid content of oak buds and leaves in the spring and green acorns in the fall. The tannins cause both kidney and digestive dysfunction.

Signs of poisoning include depression, body weight loss, frequent urination, eye and nasal discharge, constipation, and bloody diarrhea. Unfortunately, many of the signs are associated with other common diseases that can affect beef cattle.

Producers that have experienced acorn poisoning in the past will often adopt the practice of supplementing the herd with calcium hydroxide (hydrated lime) as a preventative measure. This is usually delivered as a ration containing 10-15% calcium hydroxide, and fed at 2 to 4 pounds per head daily to mature beef cattle. Some cattle producers have utilized calcium carbonate (limestone) as opposed to hydrated lime. The efficacy of this practice is unknown and therefore is not recommended. Purgatives (mineral oil, sodium sulfate, or magnesium sulfate) may be administered as an antidote if caught early during the course of the disease.

Preventing cattle from grazing wooded areas and providing an adequate diet from hay and supplement during shortages of pasture will help reduce the incidence of cattle foraging on oaks and acorns.

WHAT ARE YOU FEEDING

I have heard it said that poor quality hay is better than a snowball. As I have been trying to balance some rations lately by figuring out what ingredient to use to supplement hay, it has been brought home, again, that poor quality hay is the most expensive hay!

It is impossible for a cow to eat enough poor quality hay to supply her nutritional needs. A dry pregnant cow may be able to get by on low quality hay, but as she gets farther along, those nutritional needs increase, and the poor quality hay just will not work. So the question is, which is more expensive: good quality hay or buying supplemental feed?
I know that most people do not test their hay, whether they grow their own or purchase their hay. Without testing the hay, you have a “pig in a poke”. Most farmers are very trusting and if a hay seller says, “This is fertilized hay”, then it is accepted as good quality hay. Not so fast my friend! **When** was it fertilized? **How much** and **what type** fertilizer was used? **How long between hay cuttings?** **An $18 hay test could save a lot of money in extra feed.**

What happens if we choose not to buy the supplemental feed to balance out the hay? Our cows will lose weight and may not rebreed.

**MINERAL DEFICIENCY IN CATTLE**

Mineral deficiencies are not obvious until things go hay-wire and you see physical symptoms. The first result of deficiency is a drop in the immune function of the animal, making it more susceptible to disease. The next is a lack of growth – you will lose growth and never know it if you’re not careful! Lastly, there is a loss of reproduction. Fewer cows breed back.

Ronald A. Matlock
County Extension Agent – Staff Chair