

## Plant And Animal Considerations For Graziers

**UNIVERSITY PARK** (Centre Co.) — Pasturing horses and other livestock is the most economical and easiest way to feed.

The most difficult thing about pasture feeding forages is the inconsistency of both feed quantity and quality. Poisonous plants and weed can cause metabolic disturbances or death of the animal. The following are some common disorders created by grazing certain pasture plants.

Ryegrass staggers usually occur in grazing animals in late summer when predominantly ryegrass pastures are dry and growing slowly. The condition occurs most commonly in sheep with occasional cases in cattle and horses. Most affected animals show no signs unless disturbed or excited.

Symptoms vary from mild tremors when animals are at rest, to severe in coordination and falling when they move or are excited. Death from this condition is rare. However, affected animals that are unable to stand may starve if left unattended.

Removing animals from the pasture and changing the feed will allow recovery. The danger of ryegrass staggers in pastures is greatly diminished with rain and increased

plant growth.

Ergotism is a condition caused by the growth of a mold that produces a poison. The ergot mold primarily infects rye and some other small grains. Some forage grasses including prairiegrass, bluegrass and ryegrass are also occasionally affected by the same mold. Seeds form a distinct dark purple to blackish mass when infected with this mold. If ergot is suspected the feed should be evaluated to determine if the mold is present.

Signs of ergotism can be similar to those of fescue toxicity. Two separate syndromes have been identified. Gangrenous ergotism, the most common form, is a chronic condition affecting cattle and occasionally swine. It is characterized by lameness, swelling around the fetlocks, pan and eventual loss of hooves due to a dry gangrene.

If severe, ears and tails can also be lost to dry gangrene.

The nervous form of ergotism, although relatively rare, usually begins with diarrhea followed by convulsions, aggressiveness and eventual paralysis of the respiratory center. There is no effective treatment except animal removal from the offending feed source. Prevention is best accomplished by clip-

ping potential problem pastures to prevent development of seed heads.

Sweet clover poisoning occurs as a result of molds that grow in poorly managed sweet clover silage or in sweet clover hay put up too wet. These molds cause the chemical dicoumarol to be formed which blocks normal blood clotting in animals that consume large quantities. (Dicoumarol is commonly used in several commercial rodent poisons).

If formed, the poison persists in hay or moldy silage and is readily eaten by animals.

The signs of sweet clover poisoning include those of abnormal bleeding. The first signs are bloody nose and black, tarry manure. Swelling of joints, lameness and difficult breathing can occur later if heavy doses are consumed. Treatment consists of removal of the feed source and administration of vitamin K to restore normal blood clotting.

Prevention includes avoiding moldy sweet clover silages and moldy hay that consists primarily of sweet clover.

Nitrate poisoning can occur in cattle and horses grazing pastures or eating hays that have accumulated high levels of nitrates during

growth. Nitrates accumulate in plants when excessive rates of fertilizer have been applied or when plants have been drought stressed. Nitrate levels tend to be higher in the lower one-third of the plant and accumulate more at night and on cloudy days.

Some species of plants that are known to accumulate nitrates include Johnsongrass, sorghum, sweetclover, bromegrass, orchardgrass, lambsquarter, oat hay, rape, barley, wheat and corn. Ensilaging forages suspected of having high nitrate levels usually reduces the chances for problems.

However, hay continues to be dangerous as the accumulated nitrates do not decrease over time.

Low levels of nitrates can cause abortion without any other symptoms. Severely affected animals develop muscle tremors, lose coordination and become weak. Moving these animals will initiate difficult breathing commonly followed by collapse and death.

Nitrate poisoning is often confused with prussic acid poisoning but is distinguished by a marked difference in blood color of affected animals. Animals poisoned by nitrates will have chocolate brown blood while those poisoned by prussic acid will

have bright red blood. Treatment by a veterinarian can be effective if initiated early.

Prevention includes mixing affected forages with normal forages to dilute the nitrate levels. Raising the cutter bar 10-12 inches to avoid cutting the lower one-third of the plant and not cutting drought-stressed forages for several days after a rain also helps avoid problems.

If high nitrate levels are suspected, samples of the forage should be submitted to a competent laboratory for analysis before the forage is fed. Horses can tolerate a higher amount of nitrate levels in feed than cattle.

Prussic acid poisoning is caused by a poison called cyanide that can be produced in several types of plants under certain growing conditions. All species of farm animals may be affected with this acute poisoning.

The plants most commonly involved in prussic acid poisoning are Johnsongrass, sundangrass, common sorghum, arrowgrass, black cherry, choke cherry, pin cherry and flax. Johnsongrass is the most toxic of the sorghums and commonly causes poisoning when subjected to frost or drought conditions.

Very young, rapidly grow-

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