

Poisoning of Livestock Animals

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You've probably heard the phrase, "Goats can eat anything". A goat is a browsing animal and they will want to check out and see what's edible. However, I've learned firsthand that just because a goat will eat it doesn't mean it's safe for them to eat. They can and will die from eating some plants just like cattle and other livestock.

Under certain growing conditions, several types of plants will produce prussic acid (hydrogen cyanide). When livestock consume these plants they are poisoned and it is called prussic acid poisoning. Poisoning occurs typically when livestock consume young plants, drought stressed plants, and/or damaged plants that are high in prussic acid.

Once eaten, cyanide is absorbed directly into the bloodstream preventing blood hemoglobin from transferring oxygen to the body cells and the animal dies from asphyxiation. Prussic acid acts rapidly, often killing the animal within minutes. Symptoms include excessive salivation, difficulty breathing, staggering, convulsions, and collapse. Because it occurs quickly, the symptoms are usually observed too late for effective treatment.

Prussic acid poisoning is related to the amount of forage consumed and the animal's physiologic condition. Most losses occur when hungry or stressed animals graze young sorghum growth. Ruminant animals (cattle, sheep and goats) are particularly susceptible because cud chewing and rumen bacteria contribute to the release of the cyanide. On our farm, the young doe kids were most susceptible to poisoning; being the smallest of the herd it didn't take much ingestion of a high prussic acid concentration to cause death. I'm still not sure what plant caused the fatalities either. However, I do know that the plants in the pasture are definitely drought stressed.

Plant species most commonly involved with prussic acid poisoning are forage and grain sorghums, Johnsongrass, and sudangrass. Other plants to take note of are Indiangrass, flax, choke cherry and elderberry.

Here's some tips if you're concerned about prussic acid poisoning and your livestock:

- Do not allow hungry animals to graze where prussic acid may be a problem.
- Do not allow animals to graze potentially troublesome plants after a light frost or after rain has ended a summer drought.
- Feed hay and/or grain to dilute the amount of cyanide consumed.
- Hay or ensile plants high in cyanide to reduce toxin levels.
- Have representative samples of any suspect forage analyzed before feeding.

For more information, please contact the local K-State Research and Extension Office. K-State Research and Extension is an equal opportunity provider and employer.