

AG NOTES
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October 11, 2022

FROST AND PASTURES

Our first frost date is generally around October 20, but we're having frost and freeze reports from around the county and more predictions for next week. We have already had some significant frost here, but not a killing frost.

These mixed days of warm air and cold nights are keeping the grasses and plants in a state of confusion, and some late sprouting of some of the grasses are what is of concern for our grazing animals. With this frost comes the potential for prussic acid poisoning in grazing animals. Although a drought can also on occasion cause this issue, frost is most commonly associated with it.

What plants are involved? Any plants in the sorghum genus such as sorghum, sorghum-sudangrass, sudangrass, johnsongrass, and shattercane. The vegetative portion of these plants contain prussic acid (although sudangrass has about 40 percent less than most other sorghums). Sorghum-sudangrass hybrids have more prussic acid than sudangrass although some crosses have been developed to contain extremely low quantities.

What does frost have to do with it? Dhurrin, a bound, non-toxic chemical, is present in these plants. If plant material is damaged by freezing, dhurrin is transformed into hydrocyanic acid which is also called cyanide or prussic acid.

What does it look like? Basically, sudden death. The signs appear suddenly (usually within 15-20 minutes of consuming the forage). Visual signs include staggering, labored breathing, spasms and foaming at the mouth. Affected animals often lie prostrate and thrash about.

Prevention? Remove animals from these forages to areas free from these plant types once our first frost occurs (or the afternoon before it is forecast). If regrowth occurs after a light frost, cattle tend to selectively graze the new growth which is potentially 2- 25 times higher in prussic acid than the stems! Because of this, animals should remain off the affected forages until two weeks after a killing frost. The good news is that unlike nitrates, the prussic acid eventually dissipates in both standing forage and in hay.

Some of this information is from a good publication Hay and Forage Grower, Purdue Forage Information.

LIME

Farmers and homeowners alike should take advantage of the dry conditions to add lime to your soils. With the increased cost of fertilizer, liming first is the most efficient use of dollars. Nutrients in soils that are acidic are less available to plants if the soil pH is low. Root development is impeded and plant nutrients are more soil-bound.

Why guess when a test will tell you what you need? A soil test will give you an analysis of your soil profile will provide a pH profile and make lime recommendations. A test will also show levels of phosphorous (P) and potassium (K) and make fertilizer recommendations based on what the intended crop is.

When is the best time to test? Anytime. When is the best time to apply lime? When you can get a lime spreader in and out of the field or on the lawn without getting stuck. When is a good time to spread the P and K? When you can get a spreader into the field. Though the plants may be dormant, these nutrients can dissolve and get into the soil profile but they are stable and won't leach away. Many folks do this in the fall or winter when it is dry.

When do we need to apply nitrogen? That depends on the crop, the season, and the weather. That application time needs to be discussed.

Collect your samples, bring them to the office and we can send them to the UT Soil Center for testing. Contact me for more information.

DROUGHT

Ever notice how most farm folks start a conversation? "It sure is dry, ain't it? Don't we need rain?" Or another version is "Ain't it wet! Wish it'd dry up some!" Or still another "Sure is hot, ain't it?" Or "Gosh, it sure is cold! This weather hurts!"

I never have to listen to a weather report, I just start a conversation with a farmer and they'll bring me up to date, as if I didn't know! First thing in the conversation, they'll let me know what the weather is and what the cure should be, warmer, colder, wetter, drier!

I've been aware of the dry conditions. We have animals to tend to, hay to harvest, water troughs to fill, lawns to mow. We depend on springs and creeks to water animals, hay to feed through the winter, and we buy grain-based feed as well. And we are aware of the markets, because we sell what we raise so we can continue to raise some more. We go through the same things that all farmers go through.

So, yes, I am concerned. A look at the drought monitor tells a sad story. I mentioned some time ago that about two-thirds of the continental United States west of the Mississippi River was in some stage of dry conditions. And some of that dry part was called D4, exceptionally dry, the worst degree of dryness.

Yesterday, I looked at the monitor and the affected dry areas have increased to what I guessed is about 75-80% of the entire continental U.S. The D4 areas have increased, too. And now we are shown on the monitor as affected. Here, we are in the first stage called abnormally dry. We haven't had rain in 29 days, according to a weather report. And we'll hit the 30-day mark before it rains as predicted this week, and we wonder then how much that will be at this point.

So, for lack of a better conversation piece right now, "It sure is dry, ain't it?"