



ADVANCED AG SYSTEMS'S

# Crop Soil News

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**"It is the crops  
that feed the  
cows that make  
the milk  
which creates  
the money."**

## **Nitrates a Real Possibility This Year**

### **Managing Oats/Triticale**

### **Last Chance for Forage.**

### **Sorghum Update**

#### **Nitrates:**

Most of the crops this year were fertilized for a normal or slightly above normal yield. Most of the corn and energy crops are yielding at best ½ of their normal yield (except for lucky pockets that got the showers – they are doing fine). This is a classic set-up for nitrate accumulation.

Many farms have planted sorghum or sorghum species. I have had a pile of calls about managing to minimize any issue with prussic acid, but we have rarely, if ever, seen prussic acid poisoning. The 500 pound gorilla in the room is nitrate accumulation. Each year, somewhere in the US, someone kills a bunch of cows by feeding forages with high nitrates. It primarily affects grasses with both corn silage and sorghum species high on the list. Adding insult to injury, weeds in droughty conditions are much more likely to accumulate high nitrate level. Thus it could be a real problem chopping the stunted corn that had a bunch of weeds come in because the corn was not growing well.

Being aware of potential problems is the first step in preventing them. Stunted corn does not guarantee nitrate, only indicates a potential problem. Sampling is the simplest way to have a clear answer. High on the sampling list is drought stressed crop that got some late season rains, and then did not ferment well if at all. Wrapped round bales could easily fit this scenario.

Dr. Cherney of Cornell University has put the following steps together for managing if you suspect high nitrates potential:

1. Delay harvest until drought has been over for a week or two.
2. Raise the cutter bar for harvest. Lower stem typically has the highest nitrate concentrations.
3. Consider making silage instead of hay or green chop.
4. Have suspected forage tested to determine whether it is necessary to dilute the forage or completely avoid feeding it.
5. Dilute high nitrate forages with a low nitrate feed source.
6. Feed a balanced ration, cattle should have access to nitrate-free water at all times.
7. Adapt cattle slowly to forage with elevated levels of nitrate. Feed forage several times a day if possible, rather than one feeding.
8. Avoid feeding green chop, particularly green chop that has heated or kept

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- overnight. Nitrites are formed with heating and are much more toxic than nitrates.
9. Don't overstock pastures with high nitrate forages. Heavy grazing results in consumption of lower canopy, higher nitrate fractions.
  10. Feed cows before turning them out into a suspected high nitrate pasture. Cattle will adapt to higher levels of nitrate over time, if concentrations do not exceed 0.9% (9000 ppm) nitrate.
  11. Observe cattle frequently if pasture is suspected to be high in nitrates.
  12. Remove animals from forage source if symptoms occur, and call a veterinarian.

**Oats and Triticale** :A number of farmers report plans to plant oats with triticale in order to get some emergency forage this fall and triticale very early next spring. Based on our limited research at the **Cornell Valatie Research farm**, it is **CRITICAL** that you mow the oats at a minimum of 3.5 inches. Where we did the triticale thrived. Where we mowed less than 3.5 inch the triticale died (see photo at right). We fertilized the triticale as normal the next spring and had an excellent harvest. This can give you two very high quality forage crops in one planting. It can be followed by a shorter season corn.



Mowing oats at 3.5 inches gave full growth to the winter triticale the next spring. Mowing closer killed the triticale and gave us nothing.

**Last Gasp Forage for 2012:** Knowing that we are being squeezed for the second year in a row with forage supplies, there is still a step you can take now to generate some additional forage. Fertilizing grass stands with nitrogen and sulfur will take advantage of the fall growth spurt that grasses normally generate in the cooler, moist, fall conditions. This will allow for a late cutting in mid-October that can be very highly digestible forage. There isn't the normal rush to get it in a limited days since last cut as grasses are not normally heading, and more importantly, the cool nights plus any sunny days will generate a very highly digestible forage.

**Sorghum Update:**A number of farms have tried the new short season BMR sorghum this year. We have a nitrogen trial at **Valatie** on this sorghum. It was suffering under the same lack of water that the rest of the crops were. We had no second cutting, and some of the corn may have died.

Through all this the sorghum only minimally rolled and kept growing. Sorghum can produce twice the dry matter tons on an inch of water compared to corn. It also can grow in higher temperatures. The bottom line will not be known for at least another month when we harvest the plots - until then it is still looking good.



While corn was rolled tight and dying, and higher density Sorghum-Sudan on the right was struggling, the BMR 83 day one cut Sorghum on the left kept growing

Sincerely,

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