



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."

Advanced Ag Systems
Research, Education, Consulting

What Happened to my Winter Forage?

The winter was very different from others (aren't they all??) with considerable cold and extensive snow in many areas. For many of the winter days, we were colder here in Tennessee than our friends in New York. The winter forage on a wide area had to struggle. Our research at Spring Hill (harvested Thursday) was estimated at 2/3 of the very high yield we had at Knoxville last year. **Watch your crop closely** as the warm spells and the **much above average temperatures forecasted** for the next two weeks can rapidly drive it past the optimum quality harvest stage before you realize it. **You need to be ready to harvest BEFORE the crop is ready!** You need to apply an inoculant to preserve that quality.



Harvest is fast approaching. You need to be ready BEFORE your crop is ready.

Aside from the weather, we have seen an increase in issues caused by disease. First, there are diseases that infect in the fall. Second is the disease that struck under the snow. The fall was optimum in most areas for diseases that occur in the fall. There are Soil Seedling rots, Bare Patch, Fusarium seedling blights, Common root rot, Fusarium crown rot, and Barley yellow stripe.

Yellowing in the fall can be caused by barley yellow dwarf viruses. This will occur in patches and as bright yellow or red. If you allow volunteer grains to grow through the summer, they carry the virus over, and then aphids transmit it to your winter forage that you planted. It can also come from late-planted small-grain crops that support both aphids and disease vectors.

Another fall disease that is stunting and yellowing can be Pythium root rot. This is caused by a fungus-like pathogen that infects the roots and crown of the plant. This especially shows in wetter areas of the field. Septoria Tritici blotch is a common fungal leaf spot that appears earlier than other fungal leaf diseases. It shows as elongated yellow to brown spots on leaves.

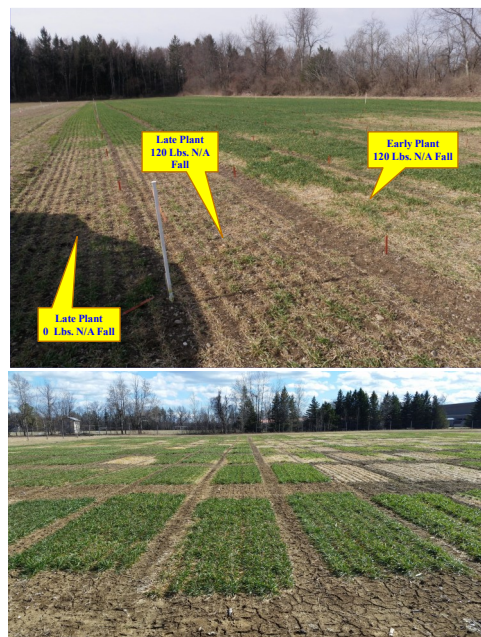
The lack of snow can cause physiological damage, especially in very cold weather after a warm spell. Temperature yo-yoed up and down this winter. In the beginning of April we had 85F and four days later was 25 F. This would be more common in the southern region as the north normally turns cold and does not go above freezing until the woolly mammoths return to the forest.

Ironically, many of these diseases can be reduced or eliminated by the simple use of a **three way seed treatment**. We have been suggesting this for many years now but farmers want to save a dollar or two per bag and often got away – until this year. Sadly they don't think twice about treating the wheat they grow for grain but want to go cheap for a forage crop. If that little cost/acre freaks you out, dropping the seeding rate from 100 lbs./a to 92 lbs./a would leave the same cost/acre but give you the protection of the seed treatment. The key fact is that when you plant the seed, you don't know what disease it will face. Even if you don't have any diseases (yet), we still recommend the seed treatment, and you still get a major return on your investment. We planted a three-way treated triticale and the same variety untreated in replicated plots (all planted at the same time). For on time planting the **treated seed yielded 15% more** than the untreated. For later planting the **treated yielded 28% more** than the untreated. Using treated seed is a no lose proposition.

This was clearly seen by a farmer in Ohio when he planted treated wheat right next to untreated triticale. You could see the difference driving by in the truck at 60 mph as the triticale was shorter, yellower, and had dead plants in it. The seed treated wheat was dark green and grew fine. Because of the yield increase, we don't plant corn, wheat, or alfalfa without treating the seed, so why is winter triticale forage (or rye) so different? Seed companies need to start adding this as a normal process like they do with corn, wheat, alfalfa, and other crops instead of playing price games by leaving it out.

The other main disease does not appear until spring green-up. **This is snow mold**. An actual infection occurs in the winter under the snow. It is especially prevalent where the winter thaw left pools of water on the frozen ground in the field. A very flat field will hold large and small pools of melted snow water. Snow mold spores travel in this water and infects the plants. It also occurs under extensive snow. It has very little to do with when you plant or how much nitrogen you put on.

As you can see in the picture at right there are three plots. On the left is a late plant with no additional nitrogen. The second is late planted with additional nitrogen. On the right is early/on time planted with additional nitrogen. All three were killed by snow mold because that is where the meltwater lay. The bigger plants (planted early or on time with fall nitrogen) are usually more successful at staying above the water and growing out of the mold. Companies are working on a fungicide to apply in the fall for control. We presently have a way of controlling it by applying sulfur fertilizer with a spreader sticker in the fall before the first snowfall that stays, to raise protein. We have fertilized with Max-N sulfur at the 2-quart rate, applying about 0.7 to 0.75 of sulfur as liquid, as it had better coverage, and that made a difference. The spreader sticker increased the fertilizer effect on snow mold. This is legal if anyone asks, because we are applying sulfur fertilizer. The fact that it controls snow mold is simply a side benefit of the fertilizer application. If you have flat fields or are in a heavy snow area, this is a low-cost preventive method. If you don't have snow mold, the sulfur still raises the protein level of the forage, which is the stated purpose of applying it.



Genetic selection for removal of varieties susceptible to snow mold can greatly reduce the incidence of infection. That said, certain conditions can overwhelm the genetics unless a fall treatment is applied.

Sincerely,

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Hand
to Better
Agriculture**

