



ADVANCED AG SYSTEMS'

Crop Soil News

<http://www.advancedagsys.com/>

AUGUST 2017

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

End of Season Management

Our weather is continuing average – last year was hot with no rain, this year it is cool with record rainfall. The messed up growing season is finally coming to an end, but it is not over yet. The hurricane season is still cranking and the east coast water is warm which supports them coming up the coast. That could really make a mess. The second issue is successfully harvesting the crops we have out in what are still wet soils (September is forecasted to be cool and wetter than normal – not what we need!)

The corn crop is problematic on two fronts. First, because of the high soil moisture during the vegetative stage, the digestibility of the fiber will be lower than normal. Secondly, many fields are like the photo at right, with extreme variability of maturity and yields as you go across the field. Harvest decisions will be a mix of the science of farming and the art of farming as you make a judgement decision of when to start chopping particular fields.



Sorghums and Sorghum Sudans.

Many farms, unable to plant corn, switched to sorghum or sorghum Sudan in the end of June and into July. As I warned in my June newsletter, early summer was not conducive to warm season crops. July has been better but the end of summer is not. My early planted variety trial is doing ok, the later July planted is not as the summer is going out with the coolest end to August in 26 years (weathertrends360). The crop seems to stand still until it reaches about a foot and ½. Then it starts to really take off and accumulate yield at a rapid rate under normal temperature. If you want yield, let it accumulate through the end of September. We will cover more of harvesting sorghum in the September newsletter.

Each year there is a degree of concern (hysteria) over prussic acid if the sorghum types get frosted. This is only an issue in grazed or green chopped. Properly ensiled crops do not have this issue as it dissipates during the ensiling. If it gets frosted you can still safely make silage out of it. They may have nitrate accumulation issues and normal forage sampling should include a nitrate test as excess nitrate has and will kill cows.

Last Call for High Quality Forage

There are piles of late cut and/or low digestibility forage across the Northeast and part of the upper Midwest. High producing cows need highly digestible forage. The last gasp for this year is to put some nitrogen plus sulfur on mostly grass or all grass fields now, and then harvest them in early October. It will be difficult to dry then but can be very highly digestible forage for the high cows.

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I am not suggesting a late cutting of alfalfa where we have had high rainfall. The alfalfa, between the excess water, extensive cloudiness (inhibits photosynthesis) and the leaf hopper deluge, has been under tremendous stress. Letting it go into the winter without cutting greatly improves the chances of it being there next spring and having enough root reserves and regrowth points to give a profitable yield. Alfalfa fields slated to be rotated or fields with greater than 50% grass could be cut. Remember to cut grass at 4 inch cutting height in order to maintain the stand.

First Chance for Very High-Quality Forage Next Year.

Now is the time to get ready to plant winter forage. Replicated research has shown winter triticale forage to be some of the highest quality forage you can make across the northeast and midwest. This will be the earliest quality forage you can get into your cows next spring. Fermented energy levels are equal to corn silage, protein (with sulfur fertilization) can equal good alfalfa. Relative Forage Quality **RFQ averaged 212**. Digestibility of the fiber (**NDF30-NDF**) was **70**.

Rye vs Winter Triticale

Both could be used to produce winter forage. Winter triticale is preferred as it is 35% higher yielding than rye in side by side tests. Flag leaf triticale resists lodging at nitrogen rates over 100 lbs.N/a while rye lodges (see photos at right). Triticale in Cornell research, held quality longer than rye or wheat allowing more time to capture the harvest window.



At greater than 50 lbs. N/A on rye above, it went flat. Right next to it triticale at 200 lbs. N/A (experiment-not recommended) still stood.

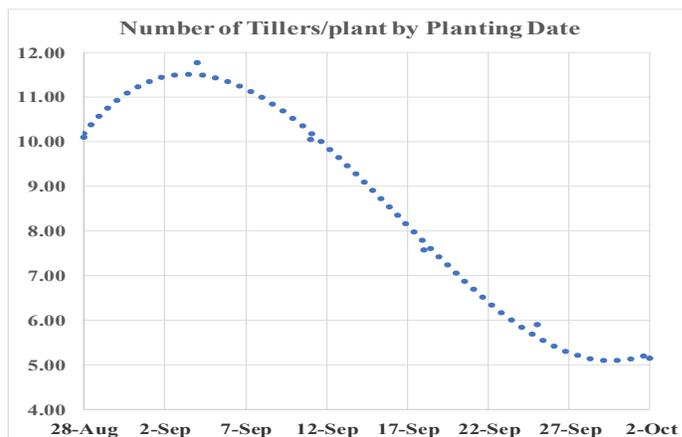
When winter triticale is planting on time it will grow rapidly and probably not need any herbicide if planted and fertilized properly, as it is a vicious competitor against fall weeds. Planting on time it will produce more soil conserving biomass and take up over 60 pounds of soil nitrogen/acre for the next spring crop. Adding and immediately incorporating manure before planting will, in an on time planted crop, store over 120 pounds of nitrogen. Manure produces more tillers in the fall which directly increases your yield potential the next spring. The 4,000 gal/a of manure we added directly and immediately incorporated in our **New York Farm Viability** supported research, **increased** our early planting **yield by 14%** and our later planted (October 5) **yields 33%**. The impact of the planting on time (September 9) resulted in 25% more yield than the October date and a week earlier (May 10 vs May 17) flag leaf harvest date. Note: the later planting did not need all the 4,000 gal/a of manure although it appears that using a nitrification inhibitor saved a portion of that nitrogen over the winter for spring use. This latter point will be, with the help of NYFVI, researched further this year.



The Key to High Yields and Nutrient Storage is Planting on time, which is: **10 DAYS TO TWO WEEKS BEFORE WHEAT-FOR-GRAIN PLANTING DATE IN YOUR AREA.** This has proven true over the past 15 years of winter forage research. **Earlier planting means more tillers** (graph at right) which means more spring yield potential.

That is the Theory, What About The Reality of This Year?

This year the corn will be coming off late. In many areas the earlier winter forage planting window is now a fantasy. Should we skip winter forage? The answer, based on my multiple years of research is to go ahead and plant. You will still protect the soil against long term yield robbing soil erosion. You will improve the soil health and structure for long term yield gain by hav-



ing living roots throughout the winter. I have planted as late as mid-October at the Valatie Research farm and had economical yields of very high-quality forage. There are several steps that our research has found to improve the yield and survival of late planted winter forage. **Don't fall for the old story that if you plant late you can make up for it by putting down more seed.** Technically yes, if you want to plant 450 pounds of seed/acre instead of the standard 100 lbs./acre it might help. Early planted will have 9 to 11 tillers/seed. Late planted will have 2 to 5. Thus you need 3 to 5 times more seed to get the same number of stems/acre. I have twice had seeding rate x planting date trials (see table at right) and there was **no yield gain up through 200 pounds of seed/acre** even in the late planting date. At the risk of being lynched by the seed companies, I have not seen any advantage planting over 100 lbs. winter triticale seed/acre. If you want higher forage yield potential go back and re-read the planting date and fall manure discussion or the seed treatment in the next paragraph.

Planted 3rd week October	
Lbs. seed/Acre	Tons DM/A
100	2.81 a
125	2.88 a
150	2.96 a
175	3.11 a
no significant yield difference between treatments	

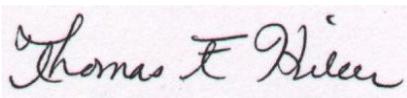
If you are forced this year to plant later than the optimum two weeks before wheat grain planting; instead of spending money on extra seed, spend it on having a **3 way fungicide seed treatment** applied to the seed (insecticide NOT beneficial). In my replicated trials at the on time planting date, the **treated seed yielded 15% more** than the control of un-treated seed. For the late planting date, the **treated seed yielded 28% more** than the control of un-treated seed. The late (October 5) still gave us 2.8 tons of dry matter (8 tons/a 35% dm) yield which is a very profitable crop.

The management **most critical to survival** in late planting is to **put the seed deep enough.** Winter forage needs to be in **1.25 inches at minimum.** If you don't, in early spring thaw the heaving will push the plant up so ½ inch of root is exposed to the air (see photos at right). The roots dry out and the plant cannot get nourishment. The blame is often assigned to the genetics of winter forage when in fact it is a hardware issue – the loose nut at the tractor steering wheel did not plant it deep enough. We have many reports of farmers who planted shallow and their neighbor planted at the correct depth. The correct depth came through the winter in good condition, while the shallow died. Just like with corn, a little extra management detail at planting will boost the yield results.

For a rundown on **planting Winter Triticale Forage** go to:

<https://www.youtube.com/watch?v=sCr-aAN-Eng>

Sincerely,

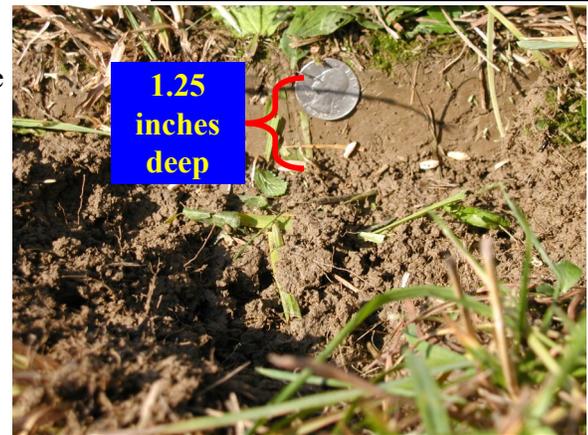


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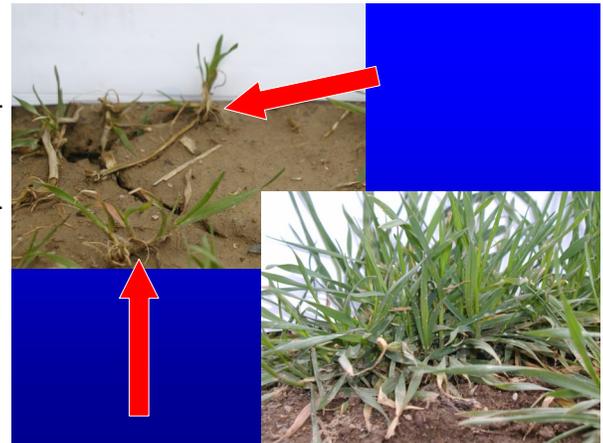
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It is CRITICAL that triticale be planted 1.25 inches deep when planting late.



Planting shallow, especially if planted late will result in the winter forage heaving out in the spring (photo upper left) and this air dries the roots, starving the plant. Correctly planted over winters and rapidly grows the next spring (photo lower right same field)

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Hand
to Better
Agriculture**

