



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."

## End of Season—or is it?

The heat of summer has been a real crop saver. Many of the days of the northeast and north central were 80-85F which is maximum for corn to grow at. With a cool – cold spring and rain delays, this greatly helped the late planted corn to make up considerable time by maximum growing degree day accumulation. Unfortunately, some in the hardest hit areas will never make maturity for silage or grain.

Whether short on quality forage, wanting to optimize production from every acre, or to save the nutrients and productive soil on your fields; **it is time to plant winter forage.** A number of farms across the upper US and southern Canada have recently added this profitable crop to their rotations. Unfortunately, the increased demand and poorer seed yield in production fields will be putting a squeeze on seed supply.



20 years of winter forage variety trials in NY have given us a good picture of what will do well, what will do poorly and what will die; as can be seen in this year's trial.

We have been researching, with the help of Dr. Sorrels at Cornell; winter triticale, winter hybrid rye, and winter barley as forage crops. Winter barley if planted early enough, appeared to come back from the dead and gave us nice yields for a very northern site (near the Canadian border). The disadvantage we see is that it matures several weeks after both winter rye and winter triticale. The hybrid rye and winter triticale were planted a little late at this new site (corrected for this fall's planting) and both were both stressed by the very hard winter. The rye matured 10 days earlier than the later triticale varieties but early triticale types matured at the same time as hybrid rye. These early varieties were equal or higher yielding than the common and hybrid rye. Common rye is discouraged from being used as its poor standability does not allow for the higher nitrogen rates necessary for both top yield and to support crude protein of 20%. Unfortunately, in this trial the hybrid rye did not have a yield advantage over the common Wheeler rye, but it appeared to have better standability. Triticale is known for its standability under high nitrogen fertilization. Regardless of species chosen, to get high yield will take several steps that we have learned are critical for optimum success.

**Earlier planting** gives higher yields. Our research suggests that planting 10 days to two weeks before the wheat grain planting date for your area is best. By **planting winter forage earlier** the plant has more time to generate tillers. The **more tillers, the more forage** yield (if you are growing for grain, you want to limit the number of tillers). Plantings September 10 in a replicated trial yielded 30% higher dry matter yield than plantings October 5. A lot of corn silage may still be in the field by October 5. Planting at that date will still give a good crop but not as high yielding as it could be. This is something we have repeatedly seen in our trials. Planting earlier gives more top and root growth. The root growth reduces winter heaving injury. The top growth protects the crown from cold desiccation, and gets

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more of the leaves above spring melt water that causes snow mold injury. Another advantage of early planting is that the crop gets growing so fast that it out competes the weeds and no herbicide is needed. This is especially true for that planted with a modern drill that places the seed exactly and firms the soil around the seed for rapid germination. Finally, earlier planting results in earlier harvest the next spring. Triticale planted September 10 was ready to **harvest a week earlier** than that planted October 5.

For many this year, the corn will be coming off late. For late planted fields, earlier winter forage planting window is probably 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 having living roots throughout the winter. I have planted as late as mid-October near Albany NY, and had **economical yields of very high quality forage**.

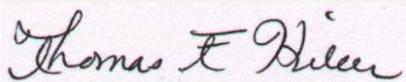
There are several steps that our research has found to improve the yield and survival of late planted winter forage. Don't fall for the old story that if you plant late you can make up for it by putting down more seed. Technically yes, if you want to plant 450 pounds of seed/acre instead of the standard 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 and have not seen any advantage planting over **100 lbs. winter triticale seed/acre**. There was **no yield gain up through 200 pounds of seed/acre** even in the late planting date. Winter rye, especially the hybrid, is planted at lower rates as it has more seeds/pound.

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) with seed treatment, still gave us 2.8 tons of dry matter (8 tons/a 35% dm) yield which is a very profitable crop.

As your planting date moves later than optimum, it becomes more critical that the crop be drilled a **minimum 1.25 inches deep**. Late planted winter forage has little time to put on weather buffering blanket of heavy vegetation. Many plantings don't even cover the soil between the rows. Seed depth is critical as we move further north, plant later, and on wetter soils, because of heaving the next spring. The plants will heave ¼ to ½ inch out of the soil. This is sufficient for the air to dry and collapse the roots. The plants turn green but never grow. The deeper planting allows the roots to have a firm grasp to resist early spring heaving. The smaller the plant (late planting) the more critical this is to survival. Triticale is winter hardy if planted correctly. **Remember you are NOT planting a cover crop**. You are planting a high yield crop that with proper management produces the highest quality forage you can grow and feed.

Finally, our trials have found a shot of nitrogen in the fall can help stimulate tillering without affecting winter hardiness. Applying and incorporating 4,000 gal/acre of manure had a significant beneficial effect on yield the next spring. Unfortunately, few can do this as the labor is tied up chopping and hauling corn. It **is more important to get the winter forage in the ground early than it is to add nitrogen as manure**. Top-dressing manure after planting is a waste as nearly all the readily available nitrogen is lost in volatilization. Spreading urea with an anti volatilization compound can push the fall tillering.

Sincerely,



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