



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."

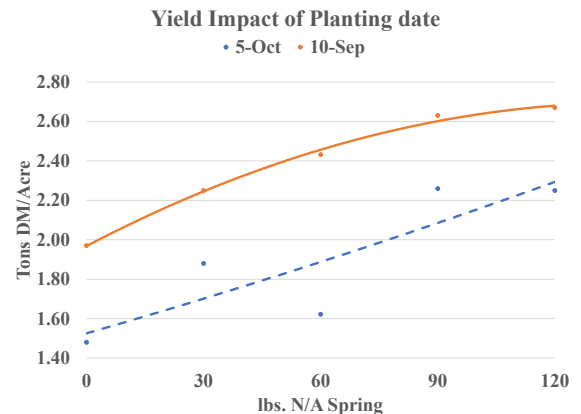
Advanced Ag Systems
Research, Education, Consulting

Increase Winter Forage Yield 60%

For a number of farms, the forage supplies this year may be very tight. First the lack of rain, and then too much rain to late. The last newsletter covered what we can do this fall for an emergency forage crop. There is one crop you can plant this fall that can give you high yields of very high-quality forage earlier in the spring than any other crop – winter forage. Winter grains, specifically winter triticale, have been increasing acreage at a tremendous rate for the past 12 years as more farmers put their money there because the crop makes money. A bonus is that the very high digestible winter forage, when added to the ration as summer heat comes on, eliminates the formerly common "summer slump".

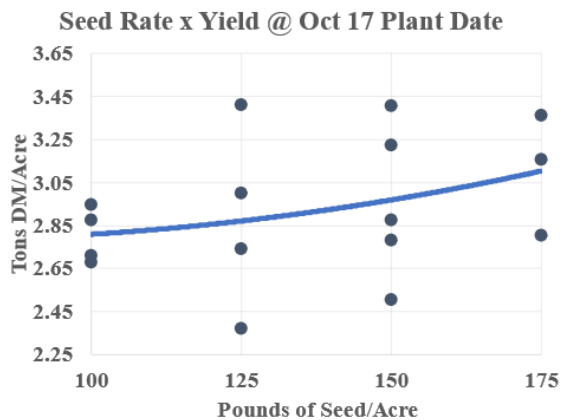
Two critical steps that have a major impact on the yield results for winter forage is the **date of planting** and the **nitrogen** supplied in the fall. When I first started growing winter triticale forage 22 years ago, a friend of mine gave me all the steps for high yield wheat grain. It was a disaster for forage yield. Only when I started doing the exact opposite of the management for grain, did I start getting 3 to 4 tons of dry matter yield at flag leaf stage.

Planting early is absolutely decisive for high yield winter triticale. As you can see in the graph at right, top line, for Albany, NY, the September 10 on **time planting** in several trials had a **25-35% higher yield** than the traditional later planted. This is a huge impact on your profit/return for the crop. On time planting means it needs to be **in the ground a minimum of 2 weeks BEFORE** the wheat planting date for your area. This is critical for both establishing a plant that can take the winter better, and to increase the number of tillers that are critical for spring yield. A bonus is that the earlier you plant the earlier the crop comes off in the spring.



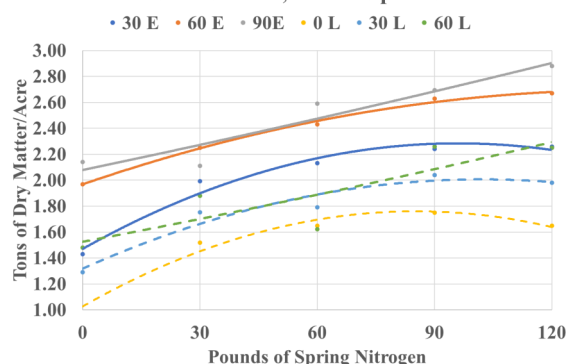
The planting date can be useful if you have considerable acreage to plant and harvest. Plant your earlier varieties first, and then plant later varieties later. This will spread the harvest window, so you are less likely to get caught with everything ready at once, and a week of rain when you wanted to mow. Don't put all your eggs in one basket. The only region where this planting suggestion is not used is the deep south. There they use facultative varieties that will head out if planted to early and so return very poor yields. They plant later and grow all winter.

The old farmer's tale of planting later and just using more seed only increases your cost not your yield. Seed supply is tight, order early and don't plant more than what will makes you money. My replicated research showed **NO benefit from seeding rate over 100 lbs./acre** (see graph at right). There was NO significant difference in yield planting more seed if you are late. If you are caught late, then plant seed with a three way seed treatment. For little cost, it boosted our yield 28% over untreated seed but yield was still less than planting on time.



The **other factor is the amount of nitrogen** (and sulfur) **applied in the fall**. This is very different than planting for grain. We want lots of tillers and nitrogen will help drive that. In my early research at a New York site, planting on time or earlier, we found that 60 lbs. of nitrogen/A (and sulfur) but not 90 lbs./A, were needed to maximize the next spring yields across all spring nitrogen rates (top two lines labeled E in lower graph at right). Note: yields were limited by an older, non indexing planter. Adding **fall nitrogen increased spring yields 20-30%**. The fall nitrogen uptake for the early planting date was more than or equal to the amount applied, so it is environmentally sound. This only works if the crop is planted on time. The dashed lines labeled "L" were planted early October. For those planting later than the wheat planting date for your area there was a response to 30 lbs. of nitrogen fall applied but not 60 lbs. of N. The late planted nitrogen uptake was only half of the 30 lbs. applied. Before you rush to get the manure spreader to apply the nitrogen as manure, both Penn State and my research found that it is the **WRONG step**. **Any delay in planting to save a little on nitrogen by spreading manure, has a major negative impact on yield the next spring**. In the fall there is nothing more important than getting the winter forage in the ground. My multi-year replicated research also found that the old farmer's tale of fall nitrogen making the crop to lush and it winter kills is completely false. Water collecting on frozen ground brings in snow mold that kills the plants. My research found that nitrogen and planting date has NO impact on that happening.

Yield Impact of Fall Nitrogen and Planting Date: E=on time; L= Late planted



The bottom line is that the combination of management steps of planting late with no fall nitrogen vs **planting on time with fall nitrogen**, at the same spring nitrogen rate **means 60% increase in yield** the next spring. This clearly shows the critical nature of planting winter forage on time with a fall nitrogen boost. Yield potential is set at planting. If it is not well established, then spring nitrogen is not very effective to boost yield. The only possible exception is if you are planting south of the Mason Dixon line where you have more fall and winter growing season.

Finally, you wouldn't plant bin run corn seed for your corn crop, why do people insist on planting their own saved seed? Seed for planting needs to be treated exactly in order to keep or enhance the germination. The crop also needs to be grown correctly to prevent disease from robbing the germination or reducing yield by bringing disease into the next forage crop.

Sincerely,

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Hand
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