



ADVANCED AG SYSTEMS'

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**

The June newsletter covered the spring conditions that made a perfect storm for poor winter forage yields this year. Yields were down but quality, for those who cut on time, was very good as always (see **fermented** forage analysis in **Addendum** to this letter). Some have been talking about dropping the crop, but there is NO crop I have seen in my 40 years of working and researching that is perfect. Every crop has a hole in its veneer.

The real advantage of the winter forage is for farms that have had weather related decreases in their total forage supply. Winter forage (triticale) will give you the earliest high quality, potentially high yielding crop, next spring; forage for the high cows. This crop is a real advantage in areas where much of the corn is growing in standing water.

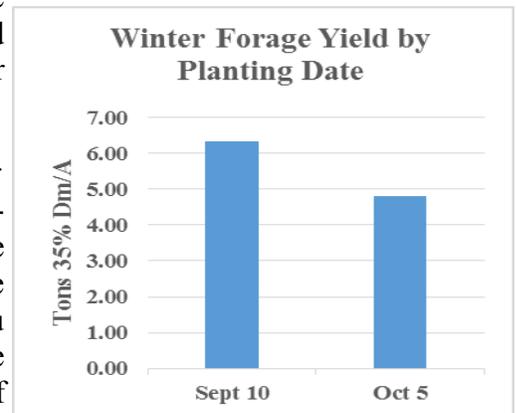
To get this yield will take several steps that we have learned are critical for optimum success:

First: start with quality seed. Bin run seed creates yield limiting disadvantages. First, you don't know what you are getting. Farms have experienced the frustration of planning on a high yielding winter triticale quality forage only to find a significant percentage of the crop is a mix with early heading, easy to lodge rye (photo right). So, do you cut when the rye is peak quality and take a 35% yield hit on the triticale, or cut when the triticale is optimum yield and quality but has 20 – 30% of the dry matter over mature rye straw? Second you don't know if it will germinate. You wouldn't buy a steer to breed your cows, why buy seed that may not germinate. Combining and throwing it in a bin where it heats, or high temperature drying will kill the germ. Thus you are buying seed that will not sprout (a steer). I have also seen a number of fields of bin run seed with weeds such as downy brome, annual ryegrass and other species that cannot easily be cleaned from the good seed. Spend slightly more and plant good seed. 100 lbs of seed/acre is suggested for on time planting.



25% heading rye and 75% still growing triticale, when do you mow?

Earlier planting to maximize yield potential. Over the years and many research trials, we have developed a rule of thumb that winter triticale for forage needs to be planted 10 days to two weeks before the normal wheat planting date. It is more critical as you go further north where winter comes swiftly. The earlier planting allows for sufficient accumulation of

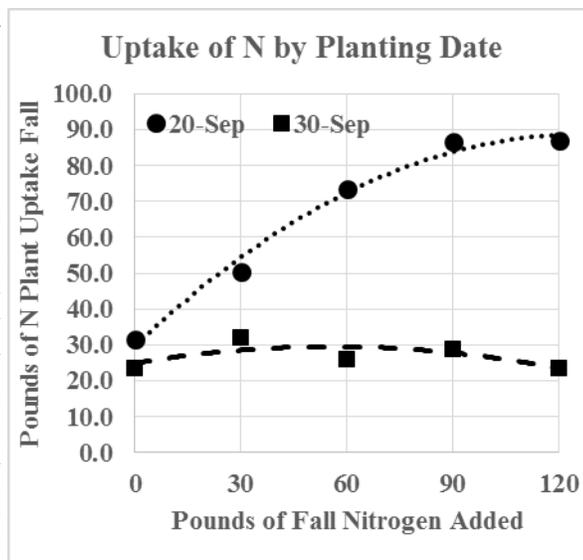


growing degree days to prolong the tillering process. The more tillers the more potential mature stems next spring which means more potential forage yield. Southern areas have a fall with long periods of temperatures in the range for optimum tillering of winter grains – thus their higher yields. In our replicated trials, planting September 20 (normal wheat planting time) vs September 30 increased yields 29%. Another year the September 10 yielded 32% over October 5 (graph previous page). If your corn is delayed because of the weather this year, you can still plant in our area into October, but you just have to recognize that yields will be down compared to earlier planting unless we have a warm fall. This is something we have repeatedly seen in our trials.



Left, late planting leaves bare ground for weeds, early planting on the right has no place for weeds.

Planting earlier gives many advantages: Planting earlier means more top and root growth. The root growth reduces winter heaving injury – the number one cause of winter kill I have seen in triticale. The top growth both directly protects, and collects snow to protect, the crown from cold desiccation in the polar vortex that hits each winter. In spring the leaf mulch protects the soil from temperature extremes that cause heaving injury. Early planting gets more leaves above spring melt water that causes snow mold injury. Even more important, the earlier planting with ground covering crown of leaves may completely eliminate any need for a fall herbicide program in the crop (photo top right). Finally, earlier winter forage takes up more nutrients. Thus utilizing this crop will allow environmentally sound manure applications in early fall that minimize ground and surface water losses. We have documented (graph at right) earlier fall planting with more vegetative growth will take up and store more nitrogen (could be from incorporated manure). This has the bonus of both increasing the number of fall tillers, and potentially reducing the amount of nitrogen need to grow the crop the next spring. Without fall manure we suggest 40 – 60 lbs. N/A for early planting. Late planting needs none.



Drill triticale 1.25 inches deep. Some farms ignored this and got away with it. The past two years a number lost their crop to winter kill while farms that planted deep enough did not have that problem. 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. The newer drills do a far superior job with this. **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 when you select your corn seed this fall, adjust for a shorter season crop to allow maximum yield of both the corn and the winter forage crop. You can drop 20 days in maturity and may only lose 3 tons of corn silage/acre (some shorter season varieties do not lose yield but equal the yield of longer ones). It is replaced with 5.5 - 10 tons of higher milk producing winter forage.

Sincerely,

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**The Helping
Hand
to Better
Agriculture**



Addendum

There are always questions on “is that forage REALLY that good?”

We samples a number of the varieties this year and then immediately chopped them, added a homolactic inoculant and then vacuum sealed the samples in the bag. After 60 days we had them analyzed at Rock River Lab in Wisconsin. The results are below. Those without high or low range had too few samples.

	Average	Low	High
DM	24.28	19.93	27.5
Crude Protein	20.35	19.71	21.07
ADF	25.42	24.06	27.53
aNDF	40.28	38.54	42.58
aNDFom	37.91	35.88	40.12
Ash	7.61	7.38	7.93
Lignin	1.02	0.44	1.87
Sugar	6.16	4.81	7.11
Starch	4.60	2.6	5.48
NDFD 30	68.21	65.57	70.21
NDFD 120	88.13	82.47	93.06
NDFD 240	98.30		
uNDF240	0.69		
TTNDFD	66.45	64.11	69.44
RFQ	193	176	206
RFV	160	147	169
Kd%/hr	5.74		
Nel	0.75	0.731	0.762
Lactic	7.97	7.44	9.24
Acetic	0.77	0.47	1.02
Butyric	0.44	0.4	0.5
pH	3.76	3.63	3.83