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Agronomics with livestock in mind!

Winter Triticale Forage Information 2010

Triticale is an exceptional forage source to help ensure sufficient, high quality forage inventories each fall and spring. A unique plant, it has been developed by carefully crossing rye and wheat varieties, and bred from those hybrids showing the best results for production and nutrient value. Here is helpful information based on recent research.

- Winter triticale can produce some of the highest quality forage available on today's farms
- Winter triticale captures yield in September, October, early November, March, April, and May, when the fields are normally bare
- Planted correctly it yields 2.5-4 tons of dry matter/acre
- Winter triticale at flag leaf stage has higher potential milk production (4,200 lbs/ton DM) than BMR corn (3,800 lbs/ton)
- Harvest is early enough to double crop short season corn, teff, soybeans, BMR Sorghum-Sudan
- Winter triticale protects Highly Erosive Land (HEL)… so if a cover crop is needed triticale can make you money
- Winter triticale at pollination will produce 25–30% more straw yield than rye, without lodging problem
- Red clover can be planted with or frost seeded into winter triticale for legume establishment
- Opens windows for manure application outside of normal cropping – manure before August/Fall triticale planting and/or late May/early spring manure before corn planting.

Planting date: The best planting opportunity, in order to achieve sufficient growth and development of the plant and root system comes from planting in late August through **early** September. The later this crop is planted, the less time for tillering and subsequently the less forage yield next spring. The colder your climate the earlier you plant!

Seeding Rate: 100-125 lbs./acre of seed

Planting method: Drill 1–1½ inches deep. Shallow-planted and/or late-planted seed forms a relatively small root system that may heave in the spring or cause some "winterkill". Uniformity is important to stand and yield.

Fertilizer: Band fertilizer for optimum fall root growth. Recommended rates include: 20 lbs of nitrogen (N) banded at planting (if fertilizer is broadcast before drilling seed, double the N rate); phosphorus (P) for rapid root development; and potassium (K) according to soil test. Testing your soil is encouraged in order to optimize fertilization and application as needed to help ensure proper plant development/growth. Spreading manure could supply the P & K that is needed. Too much manure produces excess growth and makes the crop susceptible to snow mold. A recommended application would include at least 100 lbs of N/acre in early spring (2–4 ton crop @ 16% CP will remove 100–200 lbs of N/acre). Manure (8,000gal/acre) can only supply half of the spring N, so applying a commercial fertilizer is critical for the rest: Stage 8… Stage 9… Stage 10.

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Harvest: For energy levels equal or better than corn silage, **harvest at Stage 9 when flag leaf is fully emerged (NO HEADS).** Boot stage is an old concept, when cows produced 12,000 lbs of milk/year. **Flag leaf is what high producing cows need.** Cut triticale, then cool season grasses, then alfalfa grass mixes and end with pure alfalfa. All forages will be of similarly high feed quality.

Triticale DM / Protein / ADF / NDF / Lignin / Sugar / Starch
Traditional: 2-3 day haylage – 35 / 16 / 36 / 61 / 3.5 / 2.7 / 0.9
Flag leaf: same day haylage – **35 / 15 / 34 / 58 / 2.9 / 8.5 / 2.1**

Harvest management: Flag leaf yields of 2-4 tons of dry matter/acre can be expected. When cut, the crop is as wet as alfalfa but yields **twice the total dry matter,** and so has twice the tons of water. It must be dried to proper levels for proper fermentation. Mow full width swath (like dry hay). Conditioning is not needed. Opening the back of the machine to allow the triticale to fly out will leave a loose porous swath that dries faster. As soon as the top layer turns grey from drying, immediately ted to expose the lower layers. If your mower does not leave a swath greater than 80% of cutter bar width, ted soon after mowing to get full spread. On a normal drying day, same-day haylage can be made. Mowing into a traditional narrow swath can be used, but allow it to sit for 2-3 days. This approach increases the risk of poorly fermented, high butyric, low sugar, mediocre silage.

Harvest Methods: Winter triticale can be spring-grazed, chopped and ensiled, or wet-wrapped in round bales or large square bales. It is critical that ensiling be done the same day it is mowed. Much of the energy is in sugar, which is rapidly respired in the swath. It requires tedding in order to dry the mass for ensiling the same day it is mowed. Because so much of the nutrients are in the form of rapidly metabolized sugar, it is imperative to ensile the same day it is mowed.

Feeding Management: Base the ration on an **IN-VITRO** analysis, since a normal NIR analysis will underestimate the energy level. The NDF is high, but also highly digestible. Properly ensiled-same day haylage will be rapidly devoured by the cows, as they love the high sugar content.

Information is being continually updated as new research data is recognized. Results are not guaranteed, since they are highly dependent on farm management and the weather.

(Edited from an article by Tom Kilcer, Advanced Ag Systems, NY; 2010)