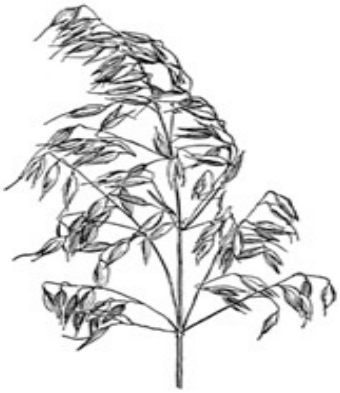

ADVANCED AG SYSTEMS'

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

Maximize Winter Forage Yield

This year we have had more reports of farms that harvested 4 to 5 tons of dry matter from flag leaf winter forage. The weather helped maximize yield but the key steps that these farms had followed set the crop up for a potential high yield in the first place. In normal years many farms are achieving more than 3 tons of dry matter before planting their summer crop. In each case, the farms are carefully following the top management steps.

1: The first step goes without saying: you need **a field with good fertility** and pH, that has not had its structure beat to death with tillage and heavy harvest equipment. The flip side is that if you have a severely compacted field and the soil is dry, the best step is to deep till and immediately plant winter triticale. The roots will stabilize the loosened soil as the first step in improving production. The research found corn increased yield by 4-7% on normal soils after a winter forage cover. Clay soils are further helped by increasing surface permeability 7 fold.

2: Select triticale for top yield and quality. The early triticale varieties are only a day or two later than rye. You can push the spring nitrogen and get 20% crude protein with triticale while the rye at that nitrogen rate would be flat on the ground. Triticale is only 2/3 the height of rye but has many more tillers to support high yields. Just like with corn, a longer (later) season variety will yield more than an earlier one – providing they are both planted on time. By selecting varieties you can spread out the harvest interval. This is becoming more critical as larger farms plant several hundred acres of the potentially heavy yielding crop.

3: Select a top-yielding variety. In our variety trials, the top commercial variety was 40% higher yielding than a cheaper older common variety. Buying Variety Not Stated (VNS) out of a farmer's bin is even riskier as you don't know what steps they took or did not take to maintain the germ for a high percentage that will actually sprout. It is like buying a steer to breed your cows, it doesn't work. My multiple-year replicated research has **not** seen any advantage in planting over **100 lbs. winter triticale seed/acre.** Planting 120 or 150 lbs. of seed as some suggest, just means you are paying 20 -50% more to establish the same crop. 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**. In my replicated trials at the on-time planting date, the **treated seed yielded 15% more** than the control of untreated seed. For the **late planting date, the treated seed yielded 28% more** than the untreated seed. Seed treatment has proven results and is cheaper than planting more seeds. We use seed treatment on our corn, alfalfa, and soybeans; why not winter forage.

4: PLANT EARLY! Plant at least 2 weeks before your wheat planting date. This is an absolutely **HUGE impact on the yield potential** for the next spring. My 20 years of winter forage research backed by multiple research projects across the Midwest and Northeast confirm planting date is the **biggest driving factor in potential yield** for the next spring. The

early planting increases the number of tillers produced in the fall. It is simple: the more tillers the more yield the next spring (providing there is enough water and fertilizer to support them). By planting earlier (10 days to 2 weeks before wheat for grain) it **increased yields 35%**. The planting date can also affect harvest date with 2 days later harvest for roughly every week later you plant.

5: Feed the crop in the fall. Our research found that up to 60 lbs. of nitrogen/acre in the fall **increased spring yields 43%** on a field without prior spring manure. The early planting and fall nitrogen available significantly increased the number of tillers that set the spring yield potential. Even with fall nitrogen application, we suggest sulfur (10 nitrogen :1 sulfur). **Do NOT delay planting the winter forage to spread manure**. My research and that from Penn State found that you lose more delaying planting than you gain adding manure.

6: If you have a sod manure injector you can apply all the spring nitrogen and sulfur needs as manure in November until the ground freezes. Some farmers in NY were still injecting into early January this past year. The nitrogen in manure is in the ammonia form which will attach to the soil particles and not leach or denitrify. When in the spring the ground warms, it will convert to nitrate and immediately be taken up by the winter forage which is already green and growing. Depending on the injector type, you may need to roll the field after to assure a smooth surface for spring mowing. For more information click on March 2021

Finally for fields that are flat or dish-shaped and spring runoff collects, they are susceptible to snow mold that can kill the crop in that area. We have fertilize those areas just before snowfall with 2 quarts of liquid sulfur fertilizer and a spreader sticker. We have found that snow mold was suppressed where we fertilize this way.

Getting a Jump on Next Year's Spring Rush

Before you get into the fall harvest rush, now is the time to sit down and plan your rotation. Yes, now, not in the winter. This sets you up to get off to a better start next spring. A critical step is to **NOT** plow sod fields for corn. A **fall-killed sod makes spring no-till planting the earliest corn you can get in the ground.** The already decaying sod is a dream to plant in as the soil is usually the consistency of potting soil. Issues like hard surfaces are nonexistent. Problems such as armyworm and slugs are non-existent. Spraying sods rotating to corn between October 1 and October 15 (Albany, NY area, adjust for your climatic region), when there are at least 6 inches of vegetation, catches most tough perennials when they are translocating into their root systems for winter storage. This brings the herbicide to the deep root systems, to get a sure kill. We have consistently gotten excellent results with .75 of glyphosate (the 1 qt. original Roundup®) and a quart of 2,4, D. The vegetation slowly breaks down over winter so I have found had little to no erosion the next spring. The ground warms much faster with the excess residue decayed over winter. In the spring, farms then no-till their corn directly into the mellow soil. There are little or no problems with penetration. Hair pinning is not a problem. The **BIG advantage** is that you can successfully no-till plant without wasting critical time, fuel, and a pile of money tilling the ground during one of the busiest times of the season. As soon as the ground is at a minimum temperature at planting depth you can simply plant without all the hassle. Spray it and you are done. Our repeated research results clearly show that this system is far superior to spring kill no-till or even worse – harvesting haylage first and then planting into harvested sod. What little haylage you get is offset by lower corn yield and difficulty getting good stands.

Sincerely,

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