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# Crop Soil News

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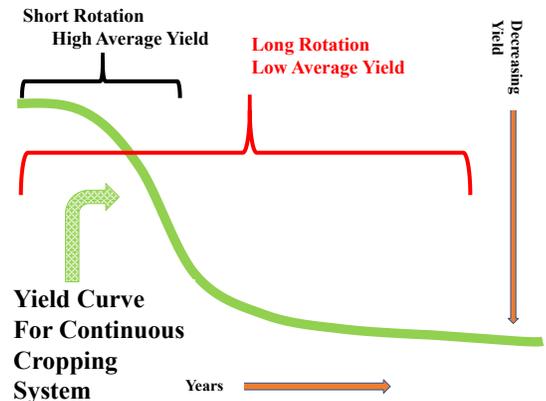
April 2020

"It is the crops that feed the cows that make the milk which creates the money."

## Saving Time and Money While Balancing Fieldwork

The first nice day in spring you are a week behind in fieldwork. The second nice day you are two weeks behind. This old adage is still true today. We have more acres to cover and often I find the equipment size has not kept up to the number of cows added and the forage planted and harvested. Easy for me to say as I don't have to write the check for the equipment. Fortunately, there are several steps that you can take to help balance the workload with the equipment that you have available. This letter will cover several of these steps. I don't expect you to make any changes this spring, but to think about them as you madly dash around trying to get all the work finished on time.

The first is crop rotation. More farms are switching to short rotations. Yields decrease over time. With a shorter rotation, more of the years are at the higher yield levels. The first cry is that I can't seed all that down, it takes too much time and costs too much to prepare the seedbed. We have other crops to get in. The answer is what more farms are switching to – **winter forage setup for seeding**. For fields that are going to be seeded down next year, they plant a slightly shorter season corn for silage or bmr sorghum for this year. The corn is harvested so that the winter forage can be in the ground two weeks before the wheat-for-grain planting date for their area. The next spring the winter forage is harvested- often with **yields double, and quality exceeding**, what a April planted seeding year will normally produce. You continue harvesting the rest of your haylage crop as that is the most important management at that time. After haylage is finished, usually the first week of June for the Albany, NY area, spray a low rate of glyphosate and 15 gallons of water carrier/acre to kill any regrowth in the winter forage stubble and any tiny weeds that got started. An hour after drying, no-till plant the legume crop. The result is a stand that jumps out of the ground quickly in warm soil; has less disease pressure because it is warmer; does not wash out because of the protective stubble, and has more moisture at the surface from that same stubble to supply the small seedings, eliminates all the tillage and stone picking of conventional tillage. The biggest factor is that we moved a major workload – seeding – from early April crunch time (manure spreading/seeding/corn planting), to early June when the spring field work slows, while simultaneously getting far better seedings with a high degree of success. (see more in [January Newsletter](#)).



The second phase of the rotation is to start the cycle of removing old hay fields by rotating to corn. The key is to use no-till to get the corn crop in with minimum time and equipment. By spraying those sods with a quart of glyphosate and a quart of 2,4,d between the first and 15<sup>th</sup> of October (Albany, NY area) the fall before planting corn, the crop can be

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put in without all the time, fuel, and equipment needed for tillage. This is the research I completed in the early 1980s when glyphosate first came on the market. It was a game-changer for having better corn, more uniform stands, higher yields, eliminating armyworm, and earlier planting while using no-till. By killing the sod in fall, the residue kept the soil from washing. Most of the residue had started to decay by spring so the soil was mellow and soft as potting soil. This allowed the planter to work better, reduced the excessive down pressure, and was the earliest corn able to be planted because you didn't need 7 – 8 inches of soil to be dry enough to be friable for tillage.

You only need the top 4-5 inches friable which occurs very early because of all the holes from the dead roots of the fall killed sod. Without needing tillage, it is the first ground you can plant. As you can see in the picture at right, fall killed sod corn is taller, and was darker green and heavier stalk than the spring killed planted the same day. Dr. Hahn the weed specialist at Cornell found a significant yield increase for fall kill over spring kill when he duplicated my work. Combined with the above shift to early June seedings in winter forage stubble, you can get very early corn planted to maximize the season.

If you are using two years of corn, and 3 - 4 years of alfalfa rotation (one of the least expensive and highest yielding you can use), 50% of your corn can be planted without tillage and earlier than regular corn. First-year corn yields are 15% higher than multi-year corn. The first year out of sod does not normally need any nitrogen above starter which is a major savings. Because you are only growing corn two years, there is no need for expensive, stacked gene varieties as rootworm is not an economic problem anymore. You can focus your cost on highly fiber digestibility, soft kernel types for further gain in feed efficiency and profit. Higher rates of manure can be injected into the second-year corn (and the winter forage) to both meet the nitrogen needs, and increase the phosphorous and potassium levels before the seeding.



Research I did in early 1980's found fall killed sods (right side of picture of a much younger Mr. Balbian, CNY dairy specialist) was taller, darker green and higher yielding than the spring killed on the left. It took less herbicide to control the sod in the fall than the spring and eliminated any army worm issues. Fall killed can be planted earlier without tillage for a huge savings in time and equipment.

### **Cropping Sequence Utilizing Winter Forage and Fall Killed No-till corn.**

- Manure is coultter injected into run out hayfield after harvest in late August, to build background fertility. The old hay will hold the nutrients through winter.
- Shorter season corn on the second year ground is harvested first. No-till triticale (100 lbs. treated seed/acre) is immediately planted into the stubble.
- Longer season first-year corn is then harvested.
- At the beginning of October, or the appropriate time for your region, the last year sod fields are fall killed as mentioned earlier in this letter.
- In November, or as late as regulations allow, 12-14,000 gallons of manure is rolling coultter injected into the triticale on the harvested second year corn ground. This can meet the nitrogen needs next spring of this high yield crop (see [September 2018 newsletter](#) for rolling coultter incorporation). Roll the field smooth after application
- In the next spring you start by no-tilling corn into the fall killed sods.
- Manure is coultter injected into acres going into second-year corn and then it can be no-tilled or chiseled.
- Winter forage is harvested at flag leaf and you continue with the rest of your haylage.
- After haylage you spray the winter forage stubble and no-till your seeding. The cycle is complete

Sincerely,

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