

No-till Corn struggles in wet year

Several farmers commented that no-till soybeans in corn stalks really struggled this year. Where they tilled the corn stalks, they think the soybeans are yielding better. That could be why farmers appear to be doing more tillage this year. If you attended Nutrient Management Certification, they heard that phosphorous needs to be “incorporated”. I prefer the term injected, because if you tell a farmer he needs to “incorporate” his fertilizer, most times they want to get out the plow! Unfortunately, that is the wrong message. Fertilizer needs to come in contact with the soil, and banding phosphorus fertilizer with starter fertilizer is a better management tool, then massive tillage. Aggressive tillage is going to lead to more soil erosion and increased water runoff, and unfortunately, higher soluble phosphorus in our surface water.

So how should farmers deal with cold wet soils in the spring? In 2014, we had a cold winter that lingered into spring. When farmers till a soil, they dry it out, losing 0.5-1 inch of water to the atmosphere, which causes the soil to warm up. It takes 10x more energy to warm up cold water than it does to warm up air.

Tillage is a short-term answer to a long-term problem. Tillage destroys your soil structure resulting in compacted soil and a loss of soil organic matter. A major reason soils are cold and wet in the spring in corn stalks is due to poor surface drainage due to poor soil structure. Yes the stalks may keep your soils cooler, but with good soil health, those stalks should decompose in the fall.

Farmers who added cereal rye to corn stalks last year found out that the rye roots improved their drainage and improved soil structure by adding soil organic matter. Farmers with cereal rye planted in corn stalks had a warmer and drier place to plant soybeans. Live cereal rye plants dries out the soil 5-7 days earlier due to transpiration (loss of water to atmosphere). Soybeans benefit from the mulch by keeping the weeds down and from the increased soil organic matter which conserves moisture in a dry summer.

Cereal rye also help suppress germinating weeds, however, the cereal rye has to be planted before the weeds germinate in the fall. Late planted cereal rye will not control weeds that have already germinated. Mark Loux, OSU Weed scientist found that cereal rye gave similar results (80+% weed control) as fall applied herbicides in 2012 but not as good of control in 2013. In 2013, the cereal rye was planted late and terminated earlier in the spring. Weeds control benefits from cereal rye come from earlier planting and the allelopathic and/or toxic effect cereal rye stems and leaves have on weeds. For some reason, soybeans planted in the spring are not affected but corn can be hurt unless the cereal rye is harvested or killed early (at least 2-3 weeks before planting corn). So this fall, rather than doing tillage and ruining your soil structure, consider planting a cover crop like rye (.5 bushel to 1 bushel per acre). Rye germinates at 32 degrees Fahrenheit, so it can be sowed all the way up to Mid-November.

A Nutrient Management Certification (NMC) for NEW Applicators without a Pesticide Applicator Training (PAT) license will be held November 18th, from 6-9PM at the Kalida K.C Hall. This is a 3 hour training and is required if you apply or broadcast fertilizer to more than 50 acres of

cropland per year. There is no fee for this training but you will need to get recertified every 3 years which will be done in the future with a combined PAT/NMC training. If you have a pesticide applicator license, you can wait and get 3 hours of PAT and two hours of NMC training all in the same day on February 3rd (8AM- 1 PM) or at night on March 17 (4-9 PM).