

Minimizing Tillage:

How focusing on sustainability can build soil health and reduce input costs

Keith Badger, an Ottawa Coop member, farms corn and soybeans with his brother in East Central Kansas. Since graduating from Kansas State and coming back to the farm full-time in the early 80s, a lot has changed in agriculture. For Keith, continuing to change with the industry, while also challenging the ways things have always been done, has been key. One of the most beneficial of these changes has been in the way that he looks at, and manages, soil health- by keeping both profitability and sustainability at the forefront.

On their farm, Keith has always tried to minimize tillage, but last year, he began noticing a big difference between fields that had been tilled ahead of planting and those that were completely no-till. The soils that were not tilled visibly held and retained water better. Seeing this difference, they began to utilize 100% no-till on soybean ground and strip-till on corn ground.

Moisture management hasn't been the only benefit they have experienced from the changes in tillage. "No-till and strip-till have really reduced the amount of disturbance to the soil. Some of our soils can be pretty fragile and very easily broken away in heavy rain events. We've really been able to cut down on the damage to the soil significantly."

While these benefits were great, what really grabbed Keith's attention was how well their soils are now holding nutrients, resulting in lowered input costs. "With the reduction in soil loss and erosion," Keith says, "You're not losing soil and you're now retaining nutrients. If you lose sediment, you lose phosphorus. Because of less soil loss from the fields, our productivity has grown."

Outside of implementing no-till and strip-till, Keith also uses variable rate technology to apply nutrients and has been gradually introducing cover crops. Through all these practices, though, he stresses how important keeping nutrients where they are applied is the most important thing to their farm and how these practices even influence consumers' perception of farming. "What's big for us is the retention of nutrients in the soils. That's how we're going to have to stay profitable- by not watching the dollars we spend wash into the streams. I also have been aware of public perception that agriculture can be insensitive to water quality issues. By being proactive on that and by being responsible with our management practices, we get to start the conversation, not defend ourselves."



An additional resource Keith leverages is the Truterra Insights Engine tool. This technology is made available to growers through Ottawa's partnership with Land O'Lakes SUSTAIN. Truterra has the ability to help growers establish their stewardship baseline and evaluate how conservation practices can boost profitability and sustainability on each field. Truterra can also help growers access conservation funding for underperforming fields, prepare them for future environmental regulations, defend their stewardship efforts and negotiate with land owners.

For Keith, Truterra is most beneficial when connecting him with cost-sharing conservation programs. "I am really immersed in resource conservation right now and I think it is an interesting platform. I want to see where it is going to go."

Interested in learning more about the Truterra Insights Engine or sustainability? Contact Lindsey at the Co-op for more information 785-242-5170 ext. 203 or lindsey1@ottawacoop.com.

