



PROFILES IN soil health

Chris Teachout
Shenendoah, IA



Teachout Succeeding by Returning to His Cover Crop Roots

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Chris Teachout – an innovative Fremont County farmer and the 2017 Iowa Conservation Farmer of the Year – is continuing his conservation efforts in hopes of inspiring and encouraging farmers and the next generation of producers to focus on improving soil health.

Teachout has been involved with conservation and soil health for decades, but it wasn't until the 1990s that he realized how beneficial practices like no-till and cover crops are for the soil. At the time, he knew he wanted to experiment and saw the potential for innovation when he began learning more about conservation.

When he began farming, Teachout and his father grew cereal rye in the spring for livestock feed and to help suppress weeds. The following year – when he tilled the rye – Teachout noticed the disk sank and stuck into the soil. He



Chris Teachout, a Fremont County farmer, inspects his soil's health with Ruth Blomquist, Soil Health Specialist for USDA's Natural Resources Conservation Service (NRCS) in Iowa and points out the strong root system.

said he began to wonder what caused soil conditions to change.

"After attending a few meetings with other local farmers throughout the years, I started hearing about cover crops and no-till and my lightbulb exploded," said Teachout. "I had a specific mental image of our family growing rye and what it did to the ground."

He and his family grew Balboa Rye, a very specific heirloom rye with a large pencil stem which creates



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great bedding for livestock and is beneficial to the soil. Balboa Rye yielded 60-70 bushels per acre. Other rye Teachout grew has a much finer stem that can lodge if given too much nitrogen and typically yields about 30 bushels per acre. Teachout says Balboa Rye can be planted until freeze and still greens up early. He learned later Balboa Rye creates a big biomass yield, making it perfect for producers focused on conservation.

“What Chris didn’t realize in the beginning is the bigger stems Balboa Rye create produce a higher carbon to nitrogen ratio and decompose slower,” said Hillary Olson, State Soil Health Specialist for USDA’s Natural Resources Conservation Service (NRCS) in Iowa. “He needs massive amounts of carbon on his land because the biology in his soil is so active that residue breaks down quickly and can leave the soil exposed.”

Cover crops and residue can help prevent drastic changes in soil temperatures. High temperatures can impact the rate of nitrification, soil moisture content, aeration, and plant nutrient availability.

“The most important thing is the soil, the health of it, and what we can do, especially now with the current nitrogen issues,” said Teachout. “If you have your biology really cranking you can get there.”

Teachout’s favorite conservation practice may be cover crops, but he also hopes to inspire others to start implementing no-till whenever they can. He tries to warn other farmers to be aware just one tillage pass can make a dangerous impact on the soil. Tilling the land can increase the threat of soil erosion, among other potentially harmful outcomes like breaking the soil structure, destroying the habitat of helpful organisms, and causing compaction.

Teachout says the biggest challenge about transitioning [to no-till] was the lack of equipment. “Today, our planter has notched discs and we just slice in there. We do not have the trash whippers on, and you just see corn coming up and the residue is still intact clear around to keep it all mulched” he said. “Last summer, by the end of June, corn residue was completely gone. We don’t have to do tillage.”

In the future, Teachout said he wants to open a training center or turn part of his acreage into research plots. His goal is to teach the next generation of farmers how conservation practices like no-till and cover crops improve soil health, thus improving yield. Teachout says he hopes to continue spreading the message of how conservation has improved his yields and how he farms in general.



Fremont County farmer Chris Teachout pointing out worm castings. These castings are indicative of having a thriving earth-worm population.

There are many resources available and ways to easily implement best practices to help landowners begin or improve their conservation efforts. Farmers and landowners looking for an innovative way to improve the conditions of their land may benefit from a conservation plan focusing on improving soil health.

NRCS can help design a custom plan to help landowners meet their goals. Plans may include a schedule for timely planting of cover crops, implementing no-till to reduce erosion, developing a grazing plan that will improve your forage base, or manage forested areas in a way that benefits wildlife habitat.

To learn more about conservation planning and programs to help you conserve natural resources on your farm, visit your local NRCS office or go to ia.nrcs.usda.gov.

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