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# PROFILES IN soil health

**Prevo Family Farms**  
Bloomfield, Iowa  
1,400 acres  
Crops: corn, soybeans, pasture  
Planting: no-till  
Covers: cereal rye, oats, radishes

unlock the  
**SECRETS**  
IN THE  
**SOIL**

## Record Yields from the Bottom Up.

A southeast Iowa farm family harvested record average yields in 2016 after managing cropland soils with no-till and cover crops. They attribute the yield bump to a bottoms up approach, by improving returns on typically poor-performing fields.

Brothers Kevin, Jason and Kyle are primary operators of the Prevo family farm just outside of Bloomfield. The trio keeps busy growing corn and soybeans on 800 acres, rotating cattle through 600 hay and pasture acres, and managing a dozen 1,200-head hog buildings. Their wives – Angela, Amanda, and Clarissa – also help out on the farm. And their mom, Cindy, does all the recordkeeping.

The Prevo brothers are the fifth generation on the family's Century Farm.

Although their work overlaps, each Prevo brother oversees a different part of the family business. Kevin is the primary agronomic decision-maker for the crop

ground; Jason cares for the 140-head of cattle, hay and pastureland; and Kyle manages the hog buildings and the manure application from those facilities.

### Record Yields

The Prevos transitioned to no-till farming with cover crops five years ago, hoping to reduce runoff and improve water infiltration on their heavy clay soils. They prepared themselves for a minor yield drag, as they had so-often heard about with no-till. They have been unexpectedly delighted, however, with the results. "I always heard at least five years yield drag on no-till, but we never saw that," said Kevin. "We actually had our best ever average yields in 2014, until we topped it in 2016 for both corn and soybeans."

Kevin attributes the average yield increase to soil improvements on traditionally lower producing ground. "Our yield monitor never went crazy high. (The improved average yields) are because the low producing acres aren't pulling us down," he said. "We are improving from the bottom up, and I really believe cover crops are the reason why."



Jason Steele, area soil scientist for USDA's Natural Resources Conservation Service (NRCS), says when farmers transition to no-till farming they should immediately incorporate cover crops into the system. "It's important to build up that soil biology with cover crops," he said. "Organic matter will increase in the poorer soils first, providing immediate improvements in infiltration rates and water holding capacity."

The Prevos are going on three straight years of whole farm record average soybean yields. Kevin says corn yields aren't far behind, "We beat our corn yield average record this year by 20 bushels per acre over our 2014 highs, and we did it on traditionally poor producing soils."

### Animal Resources

Along with cover crops, the Prevos are utilizing their valuable animal resources to help produce a consistently high yielding crop. They knife hog manure into crop residue and a growing cover crop in the fall to add nutrients in the soil. "I like the idea of growing the cover crop before the manure application," said Kevin. "We utilize the quick response of the cover crop to absorb any residual nitrogen that's on the surface."

"From a soil health standpoint, that nitrogen taken up into the plant will become available down the road in July," said Steele. "It's almost like a late season side dress."

Like many Midwest livestock producers, the Prevos are turning their cattle out to their fields to feed on cover crops. Fall 2016 was a banner year for cover crop growth in most of Iowa. "When the cover crops are growing like they are this year (Fall 2016), we may not feed cattle hay until February," said Kevin. "We would like to get to the point where we're only feeding hay during calving season."

Steele says livestock cover crop grazing will actually help cover crop growth. "Cover crops will grow and regrow faster with the cattle grazing it," he said.

Last fall, the Prevos drilled in cereal rye and oats after harvest. "The cattle grazed it down right away, and when I went out there a couple days later, there was regrowth," said Jason Prevo. "They would graze it again, and it would come right back up."



**Kevin Prevo talks to NRCS Soil Conservationist Stacy Erdmann about the fall cover crop growth on his farm near Bloomfield.**

### Stewardship Never Ends

The Prevos signed a five-year Conservation Stewardship Program (CSP) contract through NRCS in 2016. They adopted nine new management activities they will implement throughout the life of the contract. Examples include using cover crop mixes to improve soil health, making equipment adjustments to reduce pesticide drift, applying phosphorus fertilizer below the soil surface, rotating livestock feed areas for water quality, and monitoring key grazing areas for improved grazing.

Kevin says their year-round system is labor intensive, but well worth it, and he says they have the manpower to handle it. With the three brothers, along with their father, Mark, uncle, Bruce, and their wives helping out during busy times of the year, they are able to drill in cover crops directly behind the combine.

Steele says the Prevo's system is a sustainable system that is allowing them to plan much better. "The crop management system they have in place will allow them to market good farm grain yields year after year," he said. "It allows them to better plan and prepare. They don't have to ride the roller coaster of highs and lows every other year that makes it really hard to market grain and be profitable."