

News Release

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## Iowa Grower Builds Soil, Stabilizes Organic Matter Losses with Cover Crops

Southeastern Iowa farmland “probably had organic matter in the 8% range when it was first surveyed, in 1841,” said Steve Berger, a second generation farmer from Wellman.

“But with tillage and soil erosion over the years, less than half that organic matter remains,” he added, in an article published in *Wallace's Farmer* last fall.

Going to No-till in the late '70 helped but adding cover crops in the past decade has really made a difference, he said. “The organic matter present in the fence rows is between 5% and 6% but less than 4% in the fields. With cover crops, we have stabilized the losses we continued to see in our soybean rotation.”

While building organic matter is important, Berger points to significant improvements that he's witnessed using cover crops, just in the past four years:

- Better, “mellower”, soil structure
- increased microbial action
- more root channels for corn roots to follow
- the soil's “bulk density” is down
- infiltration rate of precipitation is up
- soil erosion on his rolling, terraced fields is reduced

Berger has used cereal rye as a cover crop pretty consistently but tried annual ryegrass about five years ago because of its deeper rooting and its ability to soak up and store nitrogen for use during the next crop season. “That's important, especially in wet years,” he said, “because annual ryegrass will cycle nutrients and keep them from being flushed out of the field through the tiles.”

The first year he tried annual ryegrass, it failed to survive the harsh winter. “I planted it a month late,” Berger said, “and I've since learned that it's

better to plant it in early September.”

This year, he planted a number of winter-hardy varieties and is pleased so far with the results. “I drilled the ryegrass seed right after harvest in early September and the rooting system is extensive, as I’ve seen when installing field tile.”

“I had heard that it was more difficult to kill annual ryegrass in the spring,” Berger continued, “and I use a higher rate of glyphosate on it than I do with cereal rye, but I’ve had no problems managing annual ryegrass whatsoever.” Berger uses an ATV sprayer so he can be timely with herbicide application even in a wet spring.

In addition to farming 2200 acres – rotating corn and soybeans in equal measure – the Bergers also raise about 20,000 hogs a year. The manure is useful as a fertilizer and is injected into the cover crops after they have germinated.

“We’ve seen a small, steady gain in organic matter over the past eight years,” Berger concluded. “And that’s important because we tend to lose organic matter in heavy soybean years. But just as important, I feel confident that – even with 40 to 50 inches of annual rainfall - the cover crops are protecting and building soil stability.”