Take cover

Cover crops offer protection in poor economy and poor climate

By Lori Sorenson

In an ag economy of shrinking profit margins, producers are turning to cover crops as a way to get more mileage out of their soil while protecting resources.

“I think farmers are going to be forced to really look at what changes they can make in their operations to make them more profitable,” said Doug Bos, assistant director of the Rock County Land Management Office.

“Talking with bankers and some farmers, these coming years could be a return of the 1980s farm crisis. … There will definitely be fallout from these low prices and high costs, especially if they continue for the predicted two years.”

He said cover crops may be one tool or piece to the puzzle to make a difference.

“The reason we promote cover crops is for soil health, erosion control and ultimately water quality,” Bos said. “But for a farmer struggling financially, they may not see these as adequate reasons to risk change.”

Bos said it’s a hard sell to invest in seedling cover crops into a corn and soybean rotation. “But the very reasons we promote it are the reasons that cover crops can make a farm more profitable,” Bos said.

There have been two local workshops on cover crops in Rock County, and Bos said the idea is slowly taking hold.

“There are those who are doing it and those who are standing back wondering if they should do it,” Bos said.

“What scares people is that it’s a whole different way of managing their operations,” he said. “It’s not the simple ‘plant your corn, spray it and walk away.’”

Take cover in extreme weather

Another message Bos is repeating is the role cover crops play in soil health and preservation.

Heavy rains pounded newly planted fields in 2015, cutting gullies through rows and carrying untold tons of topsoil with water runoff. Now there are increased efforts underway to maintain a vegetative cover on vulnerable soil to prevent this type of erosion and improve soil health.

“It will help buffer against weather extremes — drought patterns and wet patterns — and also extreme weather events that contribute to soil erosion,” Bos said.

Weather data shows that extreme weather events are more frequent and more severe than in recent years. Climatologists refer to an extreme rain event as more than 6 inches of rain in 24 hours in a specific area.

If this much rain hits black dirt in the spring, the damage can be devastating with truckloads of topsoil and new plants washing away through deep gullies cut through fields.

In the past 15 years there were eight recorded “extreme” events, during which pounding rain caused localized flooding and damage, especially on row-

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Spring Planting Season is just around the corner… drive safely
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crop fields with exposed soil. This compares to 15 extreme events in the previous 120 years between 1880 and 2000.

“This gives you an idea of how many of these rainfall events we can expect and their increased frequency,” Bos said.

“Call it what you want — if you don’t believe in global warming, it’s about climate change, and our farmers are going to have to make some adaptations to protect themselves and their soil.” He said farmers are going to have to adapt their land use practices in order to protect their topsoil.

“Cover crops are a hedge against these extreme events,” Bos said. “Around mid-May when everything is tilled and there’s not enough to hold the soil, everything can go.”

“... I hope in the long run we see farmers looking at different options to keep that soil covered and keep biological activity going in the soil as long as we can.” He said the return on cover crop investment improves the longer the practices are in place.

“We want to create a better soil environment to allow moisture-holding capacity that drains more efficiently and prevents compaction,” Bos said. “They may not produce more, but it will make them more resilient to climate change.”

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Owner

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Tons of topsoil washes from a field into a ditch during a 2015 extreme rain event in Rock County.
For livestock producers, cover crops are 'no brainer'

By Lori Sorenson

Brad Petersen for many years rotated corn and soybeans on his farmable acres near Hardwick. Now he rotates oats in the planting schedule on 30 acres, which are also seeded with cover crops and used for grazing, manure and other income.

For Petersen, cover crops are a no-brainer. “To be honest, I like the benefit I have just in cattle feed and the extra crop in the rotation,” he said. “Plus it’s good for the soil.”

He plants his oats in the spring, using an old end-gate seeder that once belonged to his grandpa, Merten Petersen. His wife, Heather, and children Megan, Mandle and Ty have all taken their turns riding in the wagon to fill the seed hopper. “Or I get my dad (Eugene) to drive and I ride in back,” Petersen said.

In mid-July the oats come off those 30 acres, manure is spread, and cover crops — a mixture of turnips, radishes and sorghum-Sudan grass — are seeded (with the same end-gate seeder).

The field develops a lush green cover of nutrient-rich vegetation by late August, which is about the time Petersen’s pastures start getting thin. So he turns out his cattle on the cover crop until they can graze on corn and stubble in the fall. This, he said, is where he sees the biggest gain from cover crops.

“Last year I grazed 78 pairs (156 animals) on 30 acres for 31 days. If I had to dry-lot feed them with silage or hay, it would have cost $6,000. That’s why I started doing it; it wasn’t until I started putting a pencil to paper that I could see it in dollars and cents.”

— Brad Petersen, Hardwick

Brad Petersen’s cattle graze on paddock on his farm near Hardwick. Incorporating cover crops into his farming operation, he said, has been a “no-brainer” in terms of its benefits for both cattle and soil. At left is a sample of soil on the Terry Aukes Farm that has benefited from cover crop roots.
For non-livestock producers, proof is in the soil

“Root mass builds organic matter, and using aggressive tillage long term degrades organic matter. Growing something green over time starts to transform the soil by increasing soil microbial activity.”

— Terry Aukes, Hills

$3 corn vs. what calves are worth, you could (just about make it).”
When people ask him if they should try cover crops, Petersen doesn’t hesitate to encourage them.
“Don’t be afraid to try it,” he said. “If you start small, you can still see the benefits.”

“I wish we’d started sooner”
Terry Aukes, Hills, said he finds himself telling people the same thing.
“Don’t let fear of the unknown keep you from trying it,” he said. “We’ve been using cover crops for eight or nine years, and I only wish we’d started sooner.”

Aukes farms with his dad, Orlie, and brothers Brian and Dan on fields that fall on the border of Minnesota, South Dakota and Iowa. They started with 60 acres of cover crops, and Terry said they noticed soil health improvement by the second or third year. Today 75 percent of the Aukes fields are rotated with cover crops, and they’re planning to do more.

Aukes and Pedersen and other local cover crop farmers have helped with local workshops to share information about how cover crops work. Doug Bos at the Rock County Land Management Office in Luverne has information about how to get started. The number is 507-283-8862.

Root mass builds organic matter, and using aggressive tillage long term degrades organic matter. Growing something green over time starts to transform the soil by increasing soil microbial activity.

For example, he said less aggressive tillage saves money in labor, fuel and equipment, and more soil nutrients translates to a savings in commercial fertilizers.

“It’s more difficult to measure other benefits, but Aukes said cover crops have improved corn and soybean yields. “The fields where we’ve been using them have been comparable or better,” he said. “They’ve been very good.”

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Livestock farmers have a more obvious financial incentive to incorporate cover crops in their fields, but Aukes, who doesn’t have livestock, said he’s seen advantages purely from the soil health perspective.

For non-livestock producers, proof is in the soil

Terry Aukes (far right) farms with his dad, Orlie, and brothers Dan (back left) and Brian on fields that fall on the border of Minnesota, South Dakota and Iowa. They started with 60 acres of cover crops, and Terry said they noticed soil health improvement by the second or third year. Today 75 percent of the Aukes fields are rotated with cover crops, and they’re planning to do more. (Submitted photo)