

Farmers discover cover to improve soil

Written by Elizabeth Barrett
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As the last of the combines roll from fields each fall, the Carlsons and many other area farmers fire up their tractors and ready spreaders to plant other crops.

Deep in corn country, it may seem strange that producers are planting cereal rye, clover, turnips and other seed varieties to improve the health and function of the soil.

But the benefits are proven.

Keeping soil covered and growing with living roots is a critical component, according to David Lamm, a soil health expert with the Natural Resources Conservation Service.

“The principles of building healthy soils are the same everywhere—you have to stop tilling the soil and switch from a monoculture crop to one with a diversity of crops that should include cover crops,” Lamm said. “But the path to soil health is different on each farm.”

Justin Carlson of Gothenburg agrees, noting that cover crops have several benefits such as nitrogen fixation.

Carlson plants cereal rye on about 1,000 corn acres each year.

“Cover crops can find the unused nitrogen from the previous crop and release it back into the soil,” he explained.

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As a result, producers may not have to apply as much nitrogen the following spring before planting corn and soybeans.

A case in point is explained by Central Nebraska Seed and Chemical supplier Jon Hudson.

Hudson had a customer who planted cereal rye during a drought year to harvest as hay for his livestock.

But because of last year's cold spring, the rye took longer to grow.

"He ended up planting corn in standing rye," Hudson said, "and his herbicide costs were a third of what he usually spent while farming traditionally.

"It also provided great mulch and tremendous corn."

In addition to the use of less herbicide and input savings, cover crops help eliminate weeds and break up soil compaction, Carlson said.

Protecting fields from wind and water erosion is another key benefit to cover crops, Carlson said.

Living organisms help keep the soil alive and retain water which is a big plus during times of drought, he said.

Probably the most popular mixture of cover crop seed in the area is cereal rye, radishes and turnips, Hudson said.

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Some farmers also plant a mixture of canola or rape seed, turnips, radishes and wheat or rye.

Producers plant different mixtures and blends of cover crops depending on what they want to accomplish, Justin said, noting that the practice is becoming more widespread.

“And there’s still a learning curve,” he noted.

By using cover crops, no-till and crop rotations, Lamm said farmers find that their soil actually has more available water for their cash crops when those crops really need it.

“Those covers actually help protect farms against weather extremes like drought,” he said.

Ranchers also plant cover crops that offer similar benefits to grazing land.

Feed costs are offset if animals graze on certain cover crops and the crops hold in nitrogen and add organic matter.

This, officials say, increases the ability in both pastures and fields to soak up water during heavy rains.

Although Hudson acknowledged that prices for cover crops have increased, he said it’s probably more because of drought and a smaller supply of seed like cereal rye grown in dryland areas.

He added that federal programs have money available for producers to buy cover crop seed and employ other conservation practices.

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SURVEY SHOWS COVER CROP BENEFITS

According to the USDA's Sustainable Agriculture Research and Education program, key findings in a nationwide survey show that:

- During the fall of 2012, corn planted after cover crops had a 3.6% increase in yield compared to side-by-side fields with no cover crops. Likewise, soybean yields were improved 11.6% following cover crops.
- In the hardest hit drought areas of the Corn Belt, yield differences were even larger, with an 11.0% yield increase for corn and a 14.3% increase for soybeans.
- Surveyed farmers are rapidly increasing acreage of cover crops used, with an average of 892 acres of cover crops per farm planted in 2012. Farmers intended to plant an average of 421 acres of cover crops in 2013. Total acreage of cover crops among farmers surveyed increased 350% from 2008 to 2012.
- Farmers identified improved soil health as a key overall benefit from cover crops. Reduction in soil compaction, improved nutrient management and reduced soil erosion were other key benefits cited for cover crops.