

Cover crops can keep fields green all year

By **Barry Amundson**
REPORTER

The idea is simple. Try to keep something growing on or covering cropland year-round or as long as possible and reap the benefits.

“Cover crops really have just boomed,” said Justin Fruechte, a forage and cover crop specialist for Millborn Seeds in Brookings, S.D. “The initial people who planted these cover crops are continuing to do it. There are just more and more getting involved with it and doing something after small grain harvest or on unplanted acres.”

Carmen Fernholtz agrees. He’s an organic producer near Madison, Minn., and an organic research coordinator for the Southwest Research and Outreach Center in Lamberton, Minn.

“There’s certainly starting to be a growing interest in cover crops in the sense that people see the value of keeping something growing on the land as many months out of the year as possible,” he said.

Scott Estabrook, a producer near Mount Vernon, S.D., has seen the benefits during the four years he has been planting cover crops and has even seen green fields pop out of the snow in the midst of the harsh South Dakota winter. With cattle and horses, he has not only used the crops for soil health and to allow for easier spring planting in his no-till operation, but also for winter grazing.

“It’s green even in the winter. It doesn’t die until we’ve had several frosts and even after that it stays green,” Estabrook said.

His horses will dig through the snow to pull the turnips up out of the cover crop mixture that also includes tillage radishes, vetch, lentils and rape-seed.

“The topsoil will stay green and they stay fat on it,” he said.

One winter, however, he had some unwanted guests. A herd of about 50 deer lived there all winter.

“I wasn’t very happy about it,” he said. “One deer doesn’t eat much, but that wasn’t good for the horses with 50 deer out there. They really made a dent in it. I think what was happening is that the horses would dig down through the snow and after that the deer would pick through what was left.”

Neal Bainbridge, who farms with his family near Ethan, S.D., and finished planting his heavy vegetation cover crop this year by Aug. 12, is also amazed how the crop has helped his family’s 400 mixed-breed cattle operation and also how the fields stay green, too, well into the winter months.

He said if the snow isn’t too heavy, the cattle can start grazing in mid-October on his turnip, radish and lentil mix until the end of February – almost to calving time.

“The cows go crazy for that stuff,” he said. “We supplement with some alfalfa out there, but they’ll eat all the tops off of everything and then wait for the frost to push the turnips and radishes out of the ground and they’ll eat those too.

“The longer we can keep the cows out on the field and out of the lot, the better,” Bainbridge said.

Fernholtz, who farms 450 acres of certified



Tri-State Neighbor photo by Barry Amundson

Scott Estabrook, a producer from Mount Vernon, S.D., shows his emerging cover crop on a 150-acre parcel of his wheat, corn and soybean operation.

organic land, is working on a project where researchers also mix several plant species, including radish, oats and winter pea.

“The tillage radish really puts down a husky taproot, 10 inches, and really assists in breaking up compacted soil,” Fernholtz said.

The small grain, he said, puts out a lot of fine roots and will scavenge a lot of nutrients even though it winterkills.

The pea can put in the extra nitrogen for the next year’s crop.

The last two years, Fernholtz said, there’s been a lot of interest in the radish while rye is always a popular small grain that producers like to plant because it survives the winter.

“One challenge is that it doesn’t get away from a person in the spring,” he said.

Fruechte agrees that the radishes are among the most popular of the cover crops.

“We’ve been getting a lot of good results in terms of the radish getting the big tuber, breaking up compaction, increasing water infiltration and creating more tilth to the soil. It’s a good nitrogen scavenger.

It can go down deep and scavenge for nitrogen and bring it back to the top to make it available for next year’s cash crop,” Fruechte said.

Producers he works with also like to mix in a legume to create more nitrogen and other plants to create organic matter.

Fernholtz has been working with the University of Minnesota to try to develop a winter-hardy, dry-field pea that will survive the winter and give the producer an option in the spring to let it grow back as green manure or let it go to maturity and take it as a cash crop.

Trials so far show that if there’s a good snow cover, there’s good survival, but otherwise it’s not too successful so far.

“We’ll keep working on it,” he said.

The researchers are also working on another project at the station in Lamberton to check planting dates. They planted eight different plant species and a few mixes Aug. 15 and will also plant more

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Sept. 1.

"We'll see what kind of biomass growth we can get and see how the planting date impacts the biomass," Fernholtz said.

In the western Minnesota region, there's usually some moisture from mid-August to mid-September. That's critical because the land can dry out and the rain is needed to get the germination going.

Fernholtz said the outside parameters for planting after the small grain harvest are Aug. 10 to Sept. 10. Fruechte believes planting until the end of August is "reasonable."

One of the challenges facing producers basically north of central Iowa is that planting crops on the corn and soybean fields after harvest is that the growing season is starting to curtail and there's not a lot of vegetative growth.

A few producers have overseeded cover crops in standing soybeans with limited success, Fernholtz said, plus it gets kind of costly.

As for his land, Fernholtz takes perhaps a little different route than most producers. When he plants the small grain for a cash crop, he underseeds it with clover or alfalfa. He said that enhances the soil structure and provides a much more tillable soil.

After he takes off the small grain, the underseeded clover and alfalfa grow back.

"If we get heavy moisture in the fall and get good regrowth, I'll cut it off and leave it in the field. Then in late October I'll do my primary tillage of chisel plowing," Fernholtz said.

The benefits of the cover crops are still there in the spring, Fernholtz said.

Estabrook likes to get his cover crop in quickly after the wheat harvest.

"The earlier the better. I like to run the drill immediately behind the combine. I'd say on the wheat the sooner the better," he said.

He uses the multi-seed mixture when he's going to put corn on the field the next year, while if it's soybeans he takes out the legumes and substitutes millet.

Estabrook has been happy with the results most of the time during those four years of planting cover crops, although if the fall moisture is low there sometimes doesn't get to be a lot of growth.

"But if I don't get a cover crop in, it's just pretty tough to get corn planted into no-till wheat the next year. It's extra work. I have to raise a whole extra crop every year," he said.

Estabrook said it's worth it. Besides helping with soil compaction, adding nutrients and grazing, the other benefits of cover crops are many.

Jill Sackett, a conservation agronomist with University of Minnesota

Extension in Fairmont, Minn., said other advantages are:

- Reducing soil erosion from wind and rain by holding soil in place;
- Preventing soil crusting;
- Improving water absorption and infiltration and slowing water from leaving the landscape;

- Preventing weed growth.

If the crops are put on prevented plant acres because of flooding or rain-outs, crop insurance rules say a producer can't graze or harvest the land before Nov. 1 or face a reduction in payments.

Most producers, Fruechte said, will

simply graze the land after Nov. 1 so they won't have to lose any of their payments.

"If you have cattle, it's just another bonus to get that late-season grazing

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