

Improving Pasture Quality with Cover Crops

Project Title: Utilizing Cover Crops to Increase Productivity, Health & Vigor on Tame Grass Pasture

Coordinator: Donnie Fiering

Location: Beach, ND

SARE Grant: \$6,905

Duration: 2013-2014

To read the full project report, go to www.sare.org/projects and search for project number FNC13-908.



With SARE support, farmers, ranchers, and Extension agents visited Feiring's Cattle Company in Beach, North Dakota to see a pasture that was improved through the use of cover crops. Photo by Trisha Feiring.

Donnie and Trisha Feiring own and operate Feiring's Cattle Company in Beach, North Dakota, a 120-head registered Black Angus cow calf operation. They also run 35 head of commercial yearling heifers. Without a lot of machinery on the ranch, the Feirings tend to think outside of the box when it comes to operational concerns.

In 2013, the Feirings were particularly concerned about the health, vigor, and productivity of 50 acres of domesticated grass pasture on their land. The acres were cropped and then seeded back to smooth brome grass about 30 years ago. The Feirings noticed that the productivity, health, and vigor of the plants had declined. Even with

adequate moisture in 2011, the Feirings did not have optimal production from the pasture. They had more bare ground than desirable and they wanted to graze it more frequently. Donnie Feiring said the soil was degraded to the extent that the Feirings needed to commit some serious time, energy, and resources to improvements.

In 2013, Donnie Feiring applied for an NCRSARE Farmer Rancher grant and received \$6,905 to increase the productivity, health, and vigor of the pasture. With the grant, he seeded 40 acres of a multi species cover crop into the declining brome grass stand. He also conducted soil biology and infiltration tests and bale grazed as many of the 40 acres as possible. Bale grazing is an approach where hay bales are left in the pasture where they are cut rather than being moved to a feedlot or other location.

In 2014, Feiring reported increased organic matter, improved soil health, and increased production on the 40 acres under the SARE project. He reported a "tremendous difference" between the growth of the cover crops on bale grazed areas versus the growth of the cover crops on non-bale grazed areas. The bale grazed rings stayed cooler, held more moisture, and had more organic matter.

The bale grazed rings also had four times the production of the rest of acres planted and were the first areas that the cattle grazed when they were turned in.

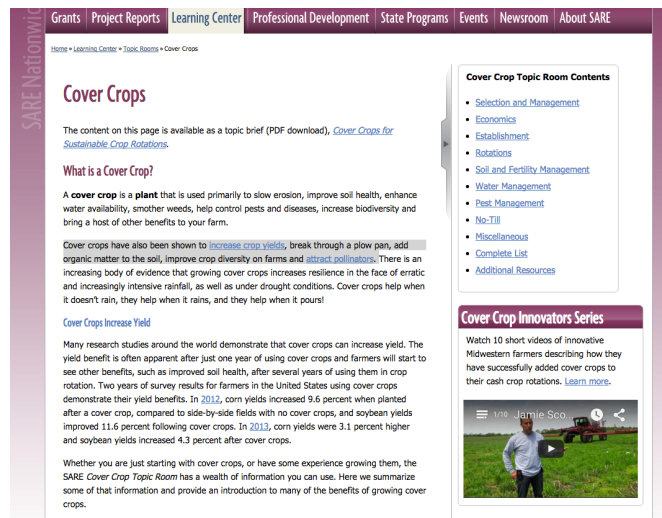
“We are seeing improvement on the 40 acres,” said Feiring. “There’s more plant variety and it seems that there’s improved infiltration. Is the improvement as fast as I want it to be? No, but I can see that the plants that are coming in are thicker and denser.”

Over the course of the project, as many as 70 farmers, ranchers, and Extension agents visited the Feirings operation to observe the pasture. Perhaps one of the farms influenced the most by the Feirings’ research was their own extended family, Trisha’s parents. Donnie said that his in-laws were pretty skeptical about cover crops, but after seeing the results of the work on the Feiring’s 40 acres, they put in almost 600 acres of cover crops on their farm in 2015.

The Feirings plan to continue the work by planting a long season cover crop on 25-30 acres in the coming year, although they have

yet to determine the mix. They also plan to do more soil sampling and look more closely at water infiltration; Feiring suspects that infiltration has improved, but he wants to measure it.

“We’ll keep working on this and improving,” said Feiring. “It’s more for my two girls than it is for me. If we can get our soils right, they can weather drought and other conditions better, and better soils will make it better for our kids. We’re looking to the future; if we’re going to be sustainable long-term, we’ve got to keep thinking outside the box. By utilizing techniques such as cover crops, bale grazing, and high stock density grazing, we believe that the land can be improved without tilling it and replanting it,” said Feiring.



Cover crops have been shown to boost yields, break through a plow pan, and add organic matter to the soil. Learn more about how cover crops can benefit a ranch operation for free online at www.sare.org/covercrops

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