Commitment to Innovation and Conservation Shapes the Littles’ Family Farm

When you stopped on a bridge over the Big Sioux River in Hamlin County last fall and looked south you could see how Donnie, Barry and Eli Little intensively manage their cows and crops to increase profitability and to improve soil and water quality.

On the west side of the river, cows grazed in one of 24 paddocks that the family manages with a program that computer savvy Eli made after graduating from South Dakota State University in 2013. An electric fence along a buffer strip by the Big Sioux River kept cows out, protecting the source of drinking water for the city of Sioux Falls. And at the far west edge of the pasture, electric fence held cows back from hives buzzing with honeybees.

From the bridge you could see the cows and their calves, the buffer strip and the bees. But to learn what the Littles were doing with the corn on the east side of the river, but you had to walk into the field. For the first time in years, corn on the sandy areas of the field had ears on it, Little said, estimating it would yield 50 bushels an acre in this spot.
Little Farm, South Dakota

By contrast, corn on the sandy ground fried and died in previous years. Little credited the change Eli making variable rate technology work for the hybrid population and for the fertilizer rates. “There are ears on every stalk on that field (along the Big Sioux River) for the first time in years,” says Barry, which he attributes to improved soil and variable rate seed and fertilizer.

The Littles’ farming operation combines brothers Donnie and Barry’s decades of experience with crops and cattle with the youthful energy and ease with precision agricultural technology possessed by Barry’s son, Eli. And their late father’s passion for planting tens of thousands of trees over many decades always comes up in the brothers’ conversations. In short, a commitment to innovation and conservation runs through the Littles’ family tree.

Donnie and Barry farm some land together and some separately, while they own the machinery and the cattle 50-50. Eli has 150 acres of crop ground and has an agreement with Donnie and Barry for use of machinery.

“No-till saves us 1-2 inches of moisture a year, which is important since we are in a moisture deficit area,” Donnie Little says. “With no-till, our soils are like a sponge. We save time in the field, as well as fuel and wear on machinery compared to tilling. When we tilled, there used to be some gullies, but not anymore with no-till. A three-inch rain will soak into our no-tilled fields.”

Multi-species cover crops have helped soil structure in the Little’s fields. The additional forage produced by the cover crops helps extend the grazing season for their cattle herd.
Profiles in soil health

Little Farm, South Dakota

“We started strip-tilling corn about five years after trying to no-till corn in a foot-and-a-half tall wheat stubble,” Donnie says. “We just couldn’t get the corn up and going and it would lag (tilled fields) by one to two weeks. But with strip-till, we have an 8-inch black strip that warms up fast in our cooler northern climate.”

Donnie says that no-till and strip-till yields are as good as or better than with tillage. “I believe my yields are better with no-till than with tillage,” he says. “On some ground, we have a moisture deficit. If you can save 1-2 inches of moisture with no-till it makes a heck of a difference. “And, our machinery costs are less with no-till,” he says. “We don’t need a digger or a disk. No-till saves a lot of time.”

Cover Crops Extend Grazing

For the Littles, multi-species cover crops provide forage for their cow-calf pairs. Barry says he hopes that “season-long” cover crops can extend the grazing by a month, from early January to early February. “We’ve turned most of our hay ground into pasture,” he says. “We are working on extending the grazing season as long as we can.”

In 2014, the Littles transitioned 40 acres of crop ground to season long cover crops. After seeding the cover crops, they put on water with a center pivot, Barry says. Little partitioned the area with electric fencing to allow rotating his herd through as the season progressed.

Barry and Eli Little decided to plant full-season cover crops for their cows after attending winter meetings of the South Dakota Grasslands Coalition and Northern Plains Sustainable Agriculture. They also applied for EQIP (Environmental Quality Incentives Program) funding for enhancing honeybee habitat. Even though they did not get the EQIP funding, the Littles went ahead and devoted space in a pasture for bee hives last summer.

Seeding the mix of full-season cover crops for grazing cost about $40 an acre for seed and yielded about $150 per acre in forage, Barry Little says.

“Rent for cropland is about $175 per acre but seeding the full-season cover crops is part of our decision to provide more feed for our increased number of cows,” Barry Little says. “While we didn’t increase the amount of pasture we had last year, with the full-season cover crops on the former crop ground we got 25 days of grazing in August and then 15 days in October. On the full-season cover crops, we had about 1.5 acres per cow-calf pair, so we got a lot of forage from a limited number of acres.”

The Littles are working to maximize what they get for production but not sacrificing their soils. Results are great, so far.

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Barry and Carolee Little

“The cows and calves did well on the full-season cover crops in October,“ Little says. “After the calves were weaned in October, they adjusted well in the feedlot.”

In early September, cows had grazed the paddock and been moved to another paddock when Little, Jim Dylla and Conservation Agronomist Eric Barsness, Brookings, SD both with NRCS, stopped by.

Some sunflowers, big purple top turnips and radishes still stood as the men inspected the pasture and evaluated the post-grazing condition of the soil.

The Littles have established rotational grazing, diversified crop rotation and seeded cover crops with the Environmental Quality Incentives Program (EQIP). “Getting your cover crops planted will do wonders for soil health and soil biology,” Dylla says.

There’s definitely a learning curve when grazing cattle on new species, Barry Little says. The first time they turned cows out into a paddock with multi-species cover crops, the cows thought they’d gotten out into a cornfield and they ran around and knocked everything down. But when they were turned out into the second paddock, the cows recognized the cover crops as a source of forage. “The cows really like to eat the tops of the purple top turnips and the radishes,” Little says.

Cover crops do more than provide forage for cows, Dylla says. They also help farmers manage excessive moisture. “We’ve had a lot of rain this year (2014),” Dylla says. “Any fall moisture is really going to be excessive, so you have to make use of it with cover crops. Instead of the nutrients leaching out of crop ground, the cover crops bring them back up to the surface where they are available for next year’s crop.”

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South Dakota Soil Health Coalition